INFORMATION TO OFFERORS OR QUOTERS
SECTION A - COVER SHEET

1. SOLICITATION NUMBER	2. *(X one)*	
		a. SEALED BID
N00173-98-R-DB06	X	b. NEGOTIATED *(RFP)*
		c. NEGOTIATED *(RFQ)*

INSTRUCTIONS

NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

You are cautioned to note the "Certification of Non-Segregated Facilities" in the solicitation. Failure to agree to the certification will render your reply nonresponsive to the terms of solicitations involving awards of contracts exceeding $25,000 which are not exempt from the provisions of the Equal Opportunity clause.

"Fill-ins" are provided on the face and reverse of Standard Form 18 and Parts I and IV of Standard Form 33, or other solicitation documents and Sections of Table of Contents in this solicitation and should be examined for applicability.

See the provision of this solicitation entitled either "Late Bids, Modifications of Bids or Withdrawal of Bids" or "Late Proposals, Modifications of Proposals and Withdrawals of Proposals."

When submitting your reply, the envelope used must be plainly marked with the Solicitation Number, as shown above and the date and local time set forth for bid opening or receipt of proposals in the solicitation document.

If NO RESPONSE is to be submitted, detach this sheet from the solicitation, complete the information requested on reverse, fold, affix postage, and mail. NO ENVELOPE IS NECESSARY.

Replies must set forth full, accurate, and complete information as required by this solicitation *(including attachments)*. The penalty for making false statements is prescribed in 18 U.S.C. 1001.

3. ISSUING OFFICE *(Complete mailing address, including ZIP Code)*

CONTRACTING OFFICER
NAVAL RESEARCH LABORATORY
ATTN: CODE 3230.DB
WASHINGTON DC 20375-5326

4. ITEMS TO BE PURCHASED *(Brief description)*

RESEARCH & DEVELOPMENT EXPTERTISE IN THE AREA OF PROGRAM MANAGEMENT, DOCUMENTATION, SYSTEMS ENGINEERING, SPACE AND AEROSPACE SYSTEMS.

5. PROCUREMENT INFORMATION *(X and complete as applicable)*

X	a. THIS PROCUREMENT IS UNRESTRICTED				
	b. THIS PROCUREMENT IS A _____ % SET-ASIDE FOR ONE OF THE FOLLOWING *(X one)*. *(See Section I of the Table of Contents in this solicitation for details of the set-aside.)*				
		(1) Small Business		(2) Labor Surplus Area Concerns	(3) Combined Small Business/Labor Area Concerns

6. ADDITIONAL INFORMATION

The Naval Research Laboratory Contracting Division issues solicitations and amendments to solicitations electronically via the Internet at the following website: http://heron.nrl.navy.mil/contracts/home.htm.

Any amendments to this solicitation will be posted at that website. Amendments will not be distributed by any other means. It is the responsibility of potential offerors to periodically review the website for amendments to this solicitation.

This solicitation is a follow-on to Contract Number N00014-94-C-2050. AlliedSignal is the incumbent contractor and the current contract value is $119,115,997.

7. POINT OF CONTACT FOR INFORMATION

a. NAME *(Last, First, Middle Initial)*	b. ADDRESS *(Include Zip Code)*
BRINKWORTH, DANIEL	NAVAL RESEARCH LABORATORY
c. TELEPHONE NUMBER *(Include Area Code and Extension) (NO COLLECT CALLS)* (202) 767-6746	4555 OVERLOOK AVE., SW CODE 3230.Db WASHINGTON, DC 20375-5326

DD FORM 1707, MAR 90 Previous editions are obsolete.

8. REASONS FOR NO RESPONSE *(X all that apply)*			
	a. CANNOT COMPLY WITH SPECIFICATIONS		b. CANNOT MEET DELIVERY REQUIREMENT
	c. UNABLE TO IDENTIFY THE ITEM(S)		d. DO NOT REGULARLY MANUFACTURE OR SELL THE TYPE OF ITEMS INVOLVED
	e. OTHER *(Specify)*		

9. MAILING LIST INFORMATION *(X one)*				
	YES		NO	WE DESIRE TO BE RETAINED ON THE MAILING LIST FOR FUTURE PROCUREMENT OF THE TYPE OF TIME(S) INVOLVED.

10. RESPONDING FIRM	
a. COMPANY NAME	b. ADDRESS *(Include Zip Code)*

c. ACTION OFFICER			
(1) Typed or Printed Name *(Last, First, Middle Initial)*	(2) Title	(3) Signature	(4) Date Signed *(YYMMDD)*

DD FORM 1707 REVERSE, MAR 90

FOLD FOLD

FOLD FOLD

FROM

AFFIX STAMP HERE

SOLICITATION NUMBER	
N00173-98-R-DB06	
DATE *(YYMMDD)*	LOCAL TIME
99 JAN 05	4:00 P.M.

TO

SOLICITATION, OFFER AND AWARD	1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) ▶	RATING	PAGE OF
		DX	1 | 33 PAGES

2. CONTRACT NO.	3. SOLICITATION NO.	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NO.
	N00173-98-R-DB06	☐ SEALED BID (IFB) ☒ NEGOTIATED (RFP)	25 NOV 98	

7. ISSUED BY CODE	8. ADDRESS OFFER TO *(If other than Item 7)*
CONTRACTING OFFICER NAVAL RESEARCH LABORATORY ATTN: CODE 3230.DB WASHINGTON DC 20375-5326	

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 2 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in BUILDING 222 RM 115 until 4:00 *(Hour)* local time 05 JAN 99 *(Date)*

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: ▶	A. NAME	B. TELEPHONE NO. *(Include area code) (NO COLLECT CALLS)*
	DANIEL BRINKWORTH	202-767-6746

11. TABLE OF CONTENTS

(✓)	SEC.	DESCRIPTION	PAGE(S)	(✓)	SEC.	DESCRIPTION	PAGE(S)
		PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES	
	A	SOLICITATION/CONTRACT FORM		X	I	CONTRACT CLAUSES	12-18
X	B	SUPPLIES OR SERVICES AND PRICES/COSTS	2			PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.	
X	C	DESCRIPTION/SPECS./WORK STATEMENT	3	X	J	LIST OF ATTACHMENTS	18
X	D	PACKAGING AND MARKING	3			PART IV - REPRESENTATIONS AND INSTRUCTIONS	
X	E	INSPECTION AND ACCEPTANCE	3	X	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	19
X	F	DELIVERIES OR PERFORMANCE	4				
X	G	CONTRACT ADMINISTRATION DATA	4-9	X	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	19-29
X	H	SPECIAL CONTRACT REQUIREMENTS	10-12	X	M	EVALUATION FACTORS FOR AWARD	31-33

OFFER *(Must be fully completed by offeror)*

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days *(60 calendar days unless a different period is inserted by the offeror)* from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT *(See Section I, Clause No. 52-232-8)* ▶	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %

14. ACKNOWLEDGMENT OF AMENDMENTS *(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:*	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*

15B. TELEPHONE NO. *(Include area code)*	15C. ☐ CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE

AWARD *(To be completed by Government)*

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:

☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN ▶ *(4 copies unless otherwise specified)* ITEM

24. ADMINISTERED BY *(If other than Item 7)* CODE	25. PAYMENT WILL BE MADE BY CODE

26. NAME OF CONTRACTING OFFICER *(Type or print)*	27. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

PART I - THE SCHEDULE

SECTION B

SUPPLIES OR SERVICES AND PRICES/COSTS

B-1 SUPPLIES/SERVICES AND COSTS

ITEM NUMBER	SUPPLIES OR SERVICES	MAXIMUM ESTIMATED COST	MAXIMUM FIXED FEE	MAXIMUM TOTAL EST COST PLUS FIXED FEE
001	The Contractor shall provide technical and scientific expertise in support of the research and development requirements in accordance with attachment number 1 and Section C.	$	$	$
002	Data in accordance with Exhibit A (DD 1423) and Enclosure (1)	* NSP	* NSP	* NSP
TOTAL ESTIMATED COST PLUS FIXED FEE		$	$	

* Not Separately Priced

MINIMUM AND MAXIMUM QUANTITIES

As contemplated by the clause of the solicitation entitled, "Indefinite Quantity", the minimum quantity that will be ordered by the Government during the effective period of the contract is research and development support requiring the contractor to provide a level of effort of 250,000 direct labor hours.

The maximum quantity that the Government may order during the effective period of the contract is research and development support requiring the contractor to provide a level of effort of 1,485,200 direct labor hours.

The minimum and maximum quantities may consist of any combination of the tasks contained in the statement of work.

SECTION C

DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C-1 STATEMENT OF WORK

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

C-2 The specific work to be carried out shall be further described in task orders issued under this contract.

C-3 REQUIREMENTS FOR ON-SITE CONTRACTORS

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 02 February 1998 which are hereby incorporated by reference. The full text is available at http://heron.nrl.navy.mil/contracts/home.htm.

SECTION D

PACKAGING AND MARKING

D-1 PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

SECTION E

INSPECTION AND ACCEPTANCE

E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE		**TITLE**
52.246-5	-	Inspection Of Services - Cost Reimbursement (APR 1984)

E-2 INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract . Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320. Constructive acceptance, in accordance with FAR 32.905 (a) (1), shall be deemed to have occurred on the 7th day after the final delivery.

SECTION F

DELIVERIES OR PERFORMANCE

F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE		TITLE
52.242-15	-	Stop-Work Order (AUG 1989) - Alternate I (APR 1984)
52.247-34	-	F.O.B. Destination (NOV 1991)

F-2 PERIOD AND PLACE OF PERFORMANCE

(a) The effective period of this contract during which delivery orders/task orders may be issued is from date of contract award through five (5) years. .

(b) Each delivery order/task order shall specify the period of performance.

(c) Each delivery order/task order shall specify the place of performance

SECTION G

CONTRACT ADMINISTRATION DATA

G-1 PROCURING OFFICE REPRESENTATIVE

In order to expedite administration of this contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Matters –Dan Brinkworth , Code 3230, (202) 767-6746, DSN 297-6746, or Telecopier (202)767-6197

Security Matters - Mr. Charles Rogers, Code 1221, (202) 767-2240, DSN 297-2240

Safety Matters - Mr. Kirk J. King, Code 1240, (202) 767-2232, DSN 297 2232

Patent Matters - Mr. Thomas McDonnell, Code 3008.2, (202) 767-3427, DSN 297-3427

Release of Data - Mr. Richard L. Thompson, Code 1230 (202) 767-2541, DSN 297-2541

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 3008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS

* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

(* To be filled in at time of award)

G-3 TECHNICAL DIRECTION MEMORANDUM (TDM)

(a) For the purposes of this clause, technical direction includes the following:

(1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
(2) Guidelines to the Contractor which assist in interpretation of drawings, specifications or technical portions of work description.

(b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:

(1) Assign additional work under the contract:
(2) Direct a change as defined in the contract clause entitled "Changes";
(3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
(4) Change any of the terms, conditions or specifications of the contract

(c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in e. Below.

(d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.

(e) TDMs shall include, but not be limited to, the following information:
(1) Date of TDM,
(2) Contract Number,
(3) Reference to the relevant portion or item in the Statement of Work,
(4) The specific technical direction or clarification, and
(5) The signature of the COR.

(f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.

(g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

G-4 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992)

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

(To be filled in at time of award)

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

(1) Contract line item number (CLIN)
(2) Subline item number (SLIN)
(3) Accounting Classification Reference Number(ACRN)
(4) Payment terms
(5) Procuring activity
(6) Date supplies provided or services performed
(7) Costs incurred and allowable under the contract
(8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided

(e) A DD Form 250, "Material Inspection and Receiving Report",

** is required with each invoice submittal.
** is required only with the final invoice.
X is not required.

(f) A Certificate of Performance

** shall be provided with each invoice submittal.
X is not required.

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Cost of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLIN/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

G-5 INCREMENTAL FUNDING

Orders issued under this contract may be incrementally funded. Incrementally funded orders will contain a provision substantially as follows:

This order is incrementally funded pursuant to the Limitation of Funds clause, FAR 52.232-22. Funds are allotted to the order in the amount of $ * and it is estimated that they are sufficient for performance through *.

(* To be filled in at time of award)

G-6 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

(a) ACRNs cited on the contractor's invoice.

(b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.

(c) The ACRN assigned to the following line of accounting:

97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.

(d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned

to the oldest allotment of funds.

(e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

G-7 ACCOUNTING AND APPROPRIATION DATA

Each delivery order/task order will contain the accounting and appropriation data for payment under the contract.

G-8 TASK ORDER PROCEDURES FOR INDEFINITE QUANTITY CONTRACTS

The following procedure shall be followed when placing task orders under this contract:

(a) Only properly appointed Contracting Officers employed at the Naval Research Laboratory (NRL) shall issue task orders under this contract.

(b) A DD Form 1155 will be issued for each task order. The DD Form 1155, "Order for Supplies or Services", shall constitute the instrument for the placement of requirements under this contract.

(c) Each task order shall be subject to FAR 52.232-20 Limitation of Cost or FAR 52.232-22 Limitation of Funds clause, as appropriate. Each task order is subject to the terms and conditions of the clause in Section H entitled, "Level of Effort Task Orders".

(d) Prior to the issuance of a task order, the contractor will be provided with the statement of work and shall promptly submit a cost proposal for performing the work. The fixed fee shall be in the same proportion to the estimated cost for each task order as the maximum fixed fee is to the maximum estimated cost for the contract as set forth in Section B.

(e) Task orders issued shall include, but not be limited to, the following information:

(1) Date of Order
(2) Contract Number and Task Order Number
(3) Accounting and Appropriation Data
(4) Description of the Work to be Performed
(5) Level of Effort
(6) DD Form 1423 (Contract Data Requirements List)
(7) Place of Performance
(8) Period of Performance
(9) Estimated Cost Plus Fixed Fee
(10) DD Form 254 (Contract Security Classification Specifications)
(11) List of Government furnished material and the estimated value thereof for each order.

(f) The ceiling amount for each task order will be the ceiling price stated therein and may not be exceeded except when authorized by a modification to the task order.

G-9 INFORMATION REQUIRED FOR SUBMISSION OF EACH ORDER

(a) The COR or TM assigned in Section G will provide the contractor with a Statement of Work (SOW) for each order. The Contractor shall provide the COR or TM with a proposal in response to the SOW. The COR or TM will prepare an acquisition package and forward to the NRL Contracting Division for issuance of an order.

(b) Direct Labor Hours, travel and material costs are subject to negotiation prior to award. In order to fully evaluate each order proposal, the contractor shall provide the following as applicable:

(1) A time phased (e.g., monthly, quarterly, etc.) breakdown of direct labor by labor category.
(2) A complete breakdown for travel identifying each cost mode of travel and the reason for the travel proposed.
(3) A complete list of all material including quantity and cost. The contractor shall provide specific documentation to serve as the basis for price verification (i.e., vendor quotations, invoices, published price lists, GSA schedule lists, etc.).

G-10 SUBCONTRACTORS/CONSULTANTS

(a) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract.

Subcontractor/Consultant Name	Time or Unit	Estimated Cost

(To be filled in at time of award)

(b) The Contracting Officer's consent required by Paragraph (c) of the contract clause entitled "Subcontracts (Cost-Reimbursement and Letter Contracts)" is hereby given for the listed subcontracts/consultants unless (i) they are of the cost-reimbursement, time-and-materials, or labor-hour type and are estimated to exceed $25,000, including any fee, (ii) are proposed to exceed $100,000, or (iii) are one of a number of subcontracts with a single subcontractor, under this contract, for the same or related supplies or services that, in the aggregate, are expected to exceed $100,000. In such cases consent shall be requested from the Administrative Contracting Officer.

(c) Any changes to the above list must be authorized by the Administrative Contracting Officer (ACO).

SECTION H

SPECIAL CONTRACT REQUIREMENTS

H-1 TYPE OF CONTRACT

(To be filled in at time of award)

H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)

(a) The Contractor agrees to assign to the contract tasks those persons whose resumes where submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least fifteen (15) days in advance (thirty (30) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

(To be filled in at time of award)

H-3 LEVEL OF EFFORT TASK ORDERS

(a) In the performance of each task order issued under this contract, the Contractor agrees to provide the level of effort specified in the task order and in accordance with this provision.

(b) The level of effort per task order shall be expended at the average monthly rate specified therein. It is understood and agreed that the rate of direct labor hours expended each month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term of the task order.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, at any time it is forecast that during the last three months of the task order less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor under a task order to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed-fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor under a task order such that the labor-hours of effort specified therein would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within ten days of receipt.

(f) If the total level of effort specified in each task order is not provided by the Contractor during the term of the task order, the Contracting Officer shall either (i) reduce the fixed fee of the task order as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{\text{(Required LOE Hours - Expended LOE Hours)}}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in the task order shall have been expended, at no increase in the fixed fee of the task order.

(g) In the event the Government fails to fully fund the task order in a timely manner, the term of the task order may be extended accordingly with no change to cost or fee. If the Government fails to fully fund the task order, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions of the above paragraphs, the Contractor may furnish labor-hours up to five percent in excess of the total direct labor-hours specified in the task order provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed-fee is required, and no adjustment in the fixed-fee shall be made provided that the Contractor has delivered at least 95% of the level of effort specified in the task order.

(i) It is understood that the mix of labor categories provided by the Contractor under the task order, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort, which was estimated by the Government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which incorporated herein applies to each task order under this contract.

H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 97)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, “Scientific and Technical Reports: Elements, Organization, and Design.”
[NOTE: ANSI Z39.18 may be obtained from NISO Press Fulfillment Center, P. O. Box 338, Oxon Hill, MD. 20750-0338. Telephone 1-800-282-6476]

H-5 ON-SITE USE OF GOVERNMENT PROPERTY

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

H-6 YEAR 2000 COMPLIANT INFORMATION TECHNOLOGY

Information technology acquired with funds provided hereunder shall be Year 2000 compliant as defined at FAR 39.002. "Information technology" is defined at FAR 2.101.

H-7 REPRESENTATIONS AND CERTIFICATIONS

The Contractor’s completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

PART II - CONTRACT CLAUSES

SECTION I

CONTRACT CLAUSES

I-1 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.
Also, the full text of a clause may be accessed electronically at this/these address(es):

http://www.arnet.gov/far
http://heron.nrl.navy.mil/contracts/home.htm

a. FEDERAL ACQUISITION REGULATION CLAUSES

FAR CLAUSE		TITLE
52.202-1	-	Definitions (OCT 1995)
52.203-3	-	Gratuities (APR 1984)
52.203-5	-	Covenant Against Contingent Fees (APR 1984)
52.203-6	-	Restrictions On Subcontractor Sales To The Government (JUL 1995)
52.203-7	-	Anti-Kickback Procedures (JUL 1995)
52-203-8	-	Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
52.203-10	-	Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
52.203-12	-	Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
52.204-2	-	Security Requirements (AUG 1996)
52.204-4	-	Printing/Copying Double-Sided On Recycled Paper (JUN 1996)
52.209-6	-	Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
52.211-15	-	Defense Priority and Allocation Requirements (SEP 1990)
52.215-2	-	Audit And Records-Negotiation (AUG 1996)
52.215-8	-	Order of Precedence - Uniform Contract Format (OCT 1997)
52.215-10	-	Price Reduction for Defective Cost or Pricing Data (OCT 1997)
52.215-11	-	Price Reduction for Defective Cost or Pricing Data - Modifications (OCT 1997)
52.215-12	-	Subcontractor Cost or Pricing Data (OCT 1997)
52.215-13	-	Subcontractor Cost or Pricing Data Modifications (OCT 1997)
52.215-14	-	Integrity of Unit Prices (OCT 1997)
52.215-15	-	Termination of Defined Benefit Pension Plans (OCT 1997)
52.215-17	-	Waiver of Facilities Capital Cost of Money (OCT 1997)
52.215-18	-	Reversion or Adjustment of Plans for Post-retirement Benefits (PRB) Other than Pensions (OCT 1997)
52.215-19	-	Notification of Ownership Changes (OCT 1997)
52.215-21	-	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data -Modifications (OCT 1997)
52.216-7	-	Allowable Cost And Payment (APR 1998)
52.216-8	-	Fixed-Fee (MAR 1997)
52.219-8	-	Utilization Of Small, Small Disadvantaged And Women-Owned Small Business Concerns (JUN 1997)
52.219-9	-	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (AUG 1998) - Alternate II (MAR 1996)
52.219-16	-	Liquidated Damages-Subcontracting Plan (AUG 1998)
52.219-23	-	Notice of Price Evaluation Adjustment For Small Disadvantaged Business Concerns (OCT 1998) Offers will be evaluated by adding a factor of 10%. _____Offeror elects to waive the adjustment
52.222-2	-	Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed _"0"_
52.222-3	-	Convict Labor (AUG 1996)
52.222-21	-	Prohibition of Segregated Facilities (APR 1984) (DEVIATION)
52.222-26	-	Equal Opportunity (APR 1984)(DEVIATION)
52.222-28	-	Equal Opportunity Preaward Clearance Of Subcontracts (APR 1984)
52.222-35	-	Affirmative Action For Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)

52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
52.222-37 - Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
52.223-2 - Clean Air And Water (APR 1984)
52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
52.223-5 - Pollution Prevention and Right-To-Know Information (APR 1998)
52.223-6 - Drug-Free Workplace (JAN 1997)
52.223-14 - Toxic Chemical Release Reporting (OCT 1996)
52.225-11 - Restrictions On Certain Foreign Purchases (AUG 1998)
52.226-1 - Utilization Of Indian Organizations And Indian-Owned Economic Enterprises (SEP 1996)
52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)
52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)
52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
52.230-2 - Cost Accounting Standards (APR 1998)
52.230-3 - Disclosure And Consistency Of Cost Accounting Practices (APR 1998)
52.230-6 - Administration Of Cost Accounting Standards (APR 1996)
52.232-9 - Limitation On Withholding Of Payments (APR 1984)
52.232-17 - Interest (JUN 1996)
52.232-18 - Availability Of Funds (APR 1984)
52.232-20 - Limitation Of Cost (APR 1984) (Applicable when the contract or task order is fully funded)
52.232-22 - Limitation Of Funds (APR 1984) (Applicable when the contract or task order is not fully funded)
52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
52.232-25 - Prompt Payment (JUN 1997)
52.233-1 - Disputes (OCT 1995)
52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
52.237-10 - Identification of Uncompensated Overtime (OCT 1997)
52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
52.242-3 - Penalties For Unallowable Costs (OCT 1995)
52.242-4 - Certification of Final Indirect Costs (JAN 1997)
52.242-13 - Bankruptcy (JUL 1995)
52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate I (APR 1984)
52.244-2 - Subcontracts (AUG 1998) - Alternate I (AUG 1996)
52.244-5 - Competition In Subcontracting (DEC 1996)
52.244-6 - Subcontracts for Commercial Items and Commercial Components (APR 1998)
52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
52.245-9 - Use And Charges (APR 1984) (DEVIATION)
52.245-18 - Special Test Equipment (FEB 1993)
52.246-23 - Limitation Of Liability (FEB 1997)
52.246-25 - Limitation Of Liability - Services (FEB 1997)
52.247-1 - Commercial Bill Of Lading Notations (APR 1984)
52.247-63 - Preference For U. S. Flag Carriers (JAN 1997)

52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
52.249-14 - Excusable Delays (APR 1984)
52.251-1 - Government Supply Sources (APR 1984)
52.252-6 - Authorized Deviations in Clauses (APR 1984)(fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
52.253-1 - Computer Generated Forms (JAN 1991)

b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

DFARS CLAUSE		TITLE
252.201-7000	-	Contracting Officer's Representative (DEC 1991)
252.203-7001	-	Special Prohibition On Employment (JUN 1997)
252.203-7002	-	Display Of DoD Hotline Poster (DEC 1991)
252.204-7000	-	Disclosure of Information (DEC 1991)
252.204-7003	-	Control Of Government Personnel Work Product (APR 1992)
252.204-7004	-	Required Central Contractor Registration (MAR 1998)
252.205-7000	-	Provision Of Information To Cooperative Agreement Holders (DEC 1991)
252.209-7000	-	Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
252.209-7003	-	Compliance With Veterans' Employment Reporting Requirements (MAR 1998)
252.209-7004	-	Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
252.215-7000	-	Pricing Adjustments (DEC 1991)
252.219-7003	-	Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
252.219-7005	-	Incentive For Subcontracting With Small Businesses, Small Disadvantaged Businesses, Historically Black Colleges And Universities And Minority Institutions (OCT 1998) If the Contractor exceeds the small disadvantaged business, historically black college and university, minority institution goal of its subcontracting plan, at completion of contract performance, the Contractor will receive 1 percent of the excess.
252.223-7001	-	Hazard Warning Labels (DEC 1991)
252.223-7004	-	Drug-Free Work Force (SEP 1988)
252.223-7006	-	Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
252.225-7001	-	Buy American Act And Balance Of Payments Program (MAR 1998)
252.225-7002	-	Qualifying Country Sources As Subcontractors (DEC 1991)
252.225-7012	-	Preference For Certain Domestic Commodities (SEP 1997)
252.225-7026	-	Reporting Of Contract Performance Outside The United States (MAR 1998)
252.225-7031	-	Secondary Arab Boycott Of Israel (JUN 1992)
252.227-7000	-	Non Estoppel (OCT 1966)
252.227-7001	-	Release Of Past Infringement (AUG 1984)
252.227-7013	-	Rights In Technical Data -- Noncommercial Items (NOV 1995)
252.227-7014	-	Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
252.227-7016	-	Rights In Bids or Proposal Information (JUN 1995)
252.227-7019	-	Validation Of Asserted Restrictions--Computer Software (JUN 1995)
252.227-7030	-	Technical Data--Withholding Of Payment (OCT 1988)

252.227-7034 - Patents--Subcontracts (APR 1984)
252.227-7036 - Declaration Of Technical Data Conformity (JAN 1997)
252.227-7037 - Validation Of Restrictive Markings On Technical Data (NOV 1995)
252.227-7039 - Patents--Reporting of Subject Inventions (APR 1990)
252.231-7000 - Supplemental Cost Principles (DEC 1991)
252.232-7009 - Payment By Electronic Funds Transfer (CCR) (JUN 1998)
252.235-7010 - Acknowledgment of Support and Disclaimer (MAY 1995)
252.235-7011 - Final Scientific Or Technical Report (MAY 1995)
252.242-7000 - Post Award Conference (DEC 1991)
252.242-7004 - Material Management And Accounting System (SEP 1996)
252.243-7002 - Requests for Equitable Adjustment (MAR 1998)
252.245-7001 - Reports of Government Property (MAY 1994)
252.247-7023 - Transportation Of Supplies By Sea (NOV 1995)
252.247-7024 - Notification Of Transportation Of Supplies By Sea (NOV 1995)
252.251-7000 - Ordering From Government Supply Sources (MAY 1995)

I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (JUN 1996)

(a) Definitions.

“Ozone-depleting substance”, as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

"WARNING: Contains (or manufactured with, if applicable)_____*_____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

* The Contractor shall insert the name of the substance(s).

I-3 DFARS 252.225-7008 - SUPPLIES TO BE ACCORDED DUTY- FREE ENTRY (MAR 1998)

In accordance with paragraph (b) of the Duty-Free Entry clause of this contract, in addition to duty-free entry for all qualifying country supplies (end products and components) and all eligible end products subject to applicable trade agreements (if this contract contains the Buy American Act - Trade Agreements - Balance of Payments Program clause or the Buy American Act - North American Free Trade Agreement Implementation Act - Balance of Payments Program clause), the following foreign end products that are neither qualifying country end products nor eligible end products under a trade agreement, and the following nonqualifying country components, are accorded duty free entry.

_____

_____

I-4 INDEFINITE DELIVERY, INDEFINITE QUANTITY CLAUSES:

FAR 52.216-18 ORDERING (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from date of contract award through five (5) years.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered “issued” when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

I-5 FAR 52.216-19 ORDER LIMITATIONS (OCT 1995)

(a) *Minimum order*. When the Government requires supplies or services covered by this contract in an amount of less than 250 hours , the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order.* The Contractor is not obligated to honor -

(1) Any order for a single item in excess of 300,000 hours

(2) Any order for a combination of items in excess of 400,000 hours ; or

(3) A series of orders from the same ordering office within 60 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 30 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

I-6 FAR 52.216-22 INDEFINITE QUANTITY (OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after ninety (90) days following the expiration of the contract.

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

SECTION J

LIST OF ATTACHMENTS

J-1 Attachment (1) - Statement Of Work –42 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements And Enclosure (1) - Instructions For Distribution- 3 Pages

J-2 Attachment (2) - DD 254, Contract Security Classification Specification Form Ser: 063-98 Dated 981028 -2 Pages.

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION - K

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

K-1 Each Offeror must submit a completed Representations, Certifications, and Other Statements Of Offerors or Respondents with their proposal which is available in full text at **http://heron.nrl.navy.mil/contracts/reps&certs.htm**

K-2 The fill-in information for FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (OCT 1998) is as follows:

The standard industrial classification (SIC) code for this acquisition is 8731
The small business size standard is 500.

K-3 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING

The Offeror's CAGE Code is {fill-in}_____.
See DFARS 252.204-7001 in Section L for procedures on requesting a CAGE Code.

SECTION L

INSTRUCTIONS CONDITIONS AND NOTICES TO OFFERORS OR RESPONDENTS

L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://www.arnet.gov/far far
http://heron.nrl.navy.mil/contracts/home.htm

FAR CLAUSE		TITLE
52.204-6	-	Data Universal Numbering System (DUNS) Number (APR 1998)
52.211-2	-	Availability of Specifications Listed in the DOD Index of Specifications and Standards (DODISS) and Descriptions Listed in the Acquisition Management Systems and Data Requirements Control List, DOD 5010.12-L (AUG 1998)
52.214-34	-	Submission Of Offers In The English Language (APR 1991)
52.214-35	-	Submission Of Offers In U.S. Currency (APR 1991)
52.215-1	-	Instructions to Offerors- Competitive Acquisition (OCT 1997)

52.215-16 - Facilities Capital Cost Of Money (OCT 1997)
52.222-24 - Preaward On-Site Equal Opportunity Compliance Evaluation (APR 1984)(DEVIATION)
52.252-5 - Authorized Deviations in Provisions (APR 1984)

L-2 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be a ☒ DX rated order; ☐ DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

L-3 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) *Exceptions from cost or pricing data*. (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered*. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data*. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or

Pricing Data, as prescribed in FAR 15.406-2.

L-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)

The Government contemplates award of an Indefinite Delivery Indefinite Quantity type contract with Cost Plus Fixed Fee Task orders resulting from this solicitation.

L-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L-6 DFARS 252.204-7001 - COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)

(a) The Offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter CAGE Before the number.

(b) If the Offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contracting Officer will--

(1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of the Commercial and Government Entity (CAGE) Code;

(2) Complete section A and forward the form to DLSC; and

(3) Notify the Contractor of its assigned CAGE code.

(c) Do not delay submission of the offer pending receipt of a CAGE code.

L-7 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)

(a) The terms used in this provision are defined in following clause or clauses contained in this solicitation--

(1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and

Computer Software--Small Business Innovative Research (SBIR) Program clause.

(2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.

(c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.

(d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions*	Basis for Assertion**	Asserted Rights Category***	Name of Person Asserting Restrictions****
(LIST)*****.	(LIST)	(LIST)	(LIST)

* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.

** Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether

development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

*** Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

**** Corporation, individual, or other person, as appropriate.

***** Enter "none" when all data or software will be submitted without restrictions.

Date _____

Printed Name and Title _____

_____

Signature _____

(End of identification and assertion)

(e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.

(f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

L-8 DFARS 252.227-7028 - TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify - -

(a) The contract number under which the data or software were produced;

(b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and

(c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

L-9 GOVERNMENT-FURNISHED PROPERTY

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

L-10 INQUIRIES CONCERNING THE RFP

Any questions concerning the RFP must be submitted in writing to the Contracting Officer at the location noted in blocks 7 and 9 of the Standard Form 33, "Solicitation, Offer and Award," no less than fifteen (15) days before closing. The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

L-11 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS

(1) Information for the technical and management proposal shall be placed in Volume I and be completely separate from the cost proposal (Volume II).

(2) Proposal Identification/Mailing - The proposal should be packaged for delivery so as to permit safe and timely arrival at destination The proposal package should be sent to the address shown in Block 7 of the RFP face page and marked:

Solicitation No. N00173-98-R-DB06
Closing Date:
(As specified in Block 9, RFP face page)
Attn: Code 3230DB

(3) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

(4) Include a matrix indicating proposed labor hours by skill category required in accordance with the level of effort breakdown identified in this section. This matrix shall not contain labor rates or any other indication of price.

(5) The following information is required for evaluation of your technical/management and cost proposal. Any additional information may be provided.

VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES

Technical Factor (1): TECHNICAL QUALIFICATIONS

1. Maintenance Activity

The offeror should provide convincing evidence of his ability to maintain and enhance SSDD special test equipment, satellite test beds, and ground station equipment. The offeror should demonstrate his experience with updates, enhancements and retrofits to existing equipment. The offeror should demonstrate his experience in maintaining a wide variety of analog and digital equipment specifically developed to support SSDD satellite, ground and tactical systems. This maintenance includes both the repair and modification of the hardware and the enhancement of software used to control the equipment and log test results.

2. Networks and Network Support

The offeror should provide convincing evidence of his of (a) ability to manage, design, configure and maintain the SSDD's computer networks; (b) ability to install, configure, test and maintain a complex network (WANs and LANs) composed of all of these types of equipment and designing new network segments as needed; (c) capability of coordinating their network activities with organizations external to the SSDD and ensuring that a consistent and compatible network structure is maintained; (d) demonstrated ability to assist in the design, implementation, test and maintenance of ATM networks utilizing state-of-the-art routers, switches, hubs and bridges; and (e) their ability to manage and trouble shoot networked computer systems consisting of over 100 nodes running various operating systems.

3. Satellite and Space Systems Development Experience

The offeror should demonstrate their ability to rapidly design, integrate and test low earth orbiting satellites with expected lifetimes in excess of three years. These satellites must be based on a bus-based architecture using radiation hardened components with on-board processing for command and control. Experience with military satellites is especially desirable.

4. Ground Station Development Experience

The offeror should demonstrate the ability to design, fabricate, install and maintain satellite ground stations and ground station equipment based on NRL's Blossom Point architecture. The should demonstrate their experience with both mobile and fixed satellite ground stations. Preference will be given to offeror's with ground station design incorporating semi-autonomous operation with multiple simultaneous satellite data exchange.

5. Tactical Communication Systems

The offeror should demonstrate his experience to support experiments and Advanced Warfighting Exercises (AWE's) involving the Army's tactical internet and Naval digitization initiatives. The offeror should be capable of deploying a team of subject matter experts to the field, correct technical anomalies discovered during the course of the exercise, and provide support to users.

Technical Factor (2): MANAGEMENT QUALIFICATIONS

1. Management Organization

The offeror should provide a description of how the program would fit into the organizational structure of the offeror's profit center. Discuss the reporting chain of the program manager within the structure (e.g., to whom the program manager reports and the level of that official within the structure). Provide a description of the relationship between the profit center and the total corporation shall be included, showing to whom the program manager of the profit center reports, and the placement of the program manager's reporting official within the total corporation. Explain the functional relationships amoung internal engineering, development and production/manufacturing entities as well as associated elements needed to successfully accomplish the program. If you are submitted your proposal as a team of companies, explain the intercompany relationships as well as program placement and reporting relationships in each company involved.

2. Risk and Risk Mitigation

The offeror will be evaluated on how well he recognizes and accesses potential risks and hazards associated with assuming the ongoing efforts described in the Statement of Work. The offeror will also be evaluated on his plan to mitigate these risks and assure a smooth transition from the incumbent contractor.

3. Facilities and Equipment

The offeror should describe the facilities and equipment that they anticipate using in order to satisfy the contract requirements. The offeror should identify whether the equipment and facilities is government owned, corporately owned or the property of a team member. This includes EMI/EMC facilities, electronic fabrication facilities, computer equipment, communication equipment, and CAD/CAM facilities. The offeror should also describe specific instances in previous contracts where corporate resources were used or new corporate resources were obtained to satisfy program requirements.

Technical Factor (3): PERSONNEL QUALIFICATIONS

The offeror should provide convincing evidence that the company has, or has the ability, to obtain personnel with relevant experience in the scientific and technical areas described in the Statement of Work. These areas are highly specialized fields and personnel without actual experience in these areas are not acceptable. The proposal should clearly show how each person offered meets the personnel qualifications as detailed in the Solicitation. The proposal should detail each person's

qualifications and experience in each area of the Statement of Work. It is essential for the offeror to demonstrate that key personnel will be capable of obtaining a SECRET clearance. The proposal should specify the amount of effort each person will be performing on this contract, both by the prime contractor as well as any proposed subcontractors

Technical Factor (4): PAST PERFORMANCE

(a) Offerors shall submit the following information as part of their proposal. (Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.) List the last five contracts or subcontracts completed during the past threeyears for services similar in nature to this requirement. Include in the five any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.

1. Name of contracting organization.
2. Contract number
3. Contract type
4. Total contract value
5. Description of the contract work
6. Contracting officer and telephone number
7. Contracting officer's representative, program manager, or similar official and telephone number

(b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available at http://heron.nrl.navy.mil/contracts/home.htm is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.

(c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

L-12 FORMAT FOR RESUMES

Offerors are requested to submit resumes for key personnel in the following format.

Resumes for key positions should not exceed two 8-1/2" x 11" single spaced type written pages (one side only). Resumes should be submitted in the following format:

Name: _____

Labor Category: _____

Function Or Product Area: _____

1. Post High School Education:

College/University	No. Credit Hrs	Date(s)	Year & Type of Degree & Major
Attend	Completed	Attended	

If alternative provisions for a degree are used, they should be identified and expanded upon in this section.

2. Experience - Describe experience as it relates to the labor category for which it is submitted. Include the various work and responsibilities you have performed or as they relate to a functional area. A Program Manager's resume should include the specific product(s), e.g., TRIDENT II MK 6 Guidance System, Etc.; an engineer's resume should contain the specific function(s), e.g., quality assurance, reliability, maintainability or safety, etc. The individual's resume should describe the work experience within the past ten years. Experience prior to that time may be documented if the individual's recent experience is in another line of work or previous work experience required greater managerial/technical expertise. Each period of work experience should be listed in the format shown below:

Dates Of Employment: Average No. Hours Per Week

Title Of Position:

Employer and Place of Employment:

Name of Supervisor and His/Her Telephone No.:

Annual Salary (Not Hourly Rate):

Kind of Business or Organization:

Security Clearance (Type and Date):

Reason for Leaving the Position:

Description of Duties, Responsibilities and Accomplishments:

3. Awards (Monetary or Other Types):

Title of Award	Date	Presented By	Reason For & Nature Of Award

4. Publications, patents, consultation services, etc. - if the individual for whom the resume is being submitted has had articles published, indicate the title of the article, where it was published, and in what year. Describe any patents the individual has obtained (include the year the patent was awarded) describe individual's experience in serving as a consultant to private industry and the government. Indicate the type of consultant services the individual provided and the fee that was received. How frequently did the individual provide the consulting services.

5. Managerial/Leadership - Describe supervisory responsibilities. Include: (1) The number and kinds of workers you directed; (2) The complexity of the work you directed i.e., was it a small unit performing one basic function or did you direct a large organization composed of a diversity of functional and product areas; (3) The number of years of supervisory experience; (4) Individual experience as it relates to estimating material, manpower, and equipment needs; scheduling work flow and work assignments; (5) Financial management responsibilities (including size of annual budget); (6) Special awards or accomplishments you received as a supervisor, and (7) Other information relative to your skill as a manager/supervisor.

VOLUME II - COST PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES

The offeror shall submit a cost proposal with supporting information for each cost element consistent with offeror's cost accounting system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate the cost elements. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission. . **Offerors are requested to provide one copy of their cost proposal on a PC formatted disk that is readable by Excel.**

L-13 TRAVEL AND MATERIAL ESTIMATES (FOR PROPOSAL PREPARATION PURPOSES ONLY). THE TRAVEL AND MATERIAL ESTIMATES ARE DIRECT COSTS AND THE OFFEROR SHOULD ADD APPLICABLE INDIRECT COSTS, IF ANY.

(A) TRAVEL WILL BE ESTIMATED AT $200,000 PER YEAR FOR PROPOSAL PURPOSES.

(B) MATERIAL WILL BE ESTIMATED AT $3,500,000 PER YEAR FOR PROPOSAL PURPOSES

L-14 GENERAL INSTRUCTIONS FOR SUBMISSION OF COST PROPOSAL FOR TASK ORDER 0001

(1) The Government intends to issue task order 0001 concurrent with contract award with a one year period of performance. Therefore, the sucessful offeror's year one cost proposal for the basic contract constitutes the offeror's cost proposal for task order 0001.

L-15 ANTICIPATED DISTRIBUTION OF DIRECT LABOR HOURS BY LABOR CATEGORIES

The following is the anticipated distribution by labor category of the maximum level of effort for five (5) years. This distribution shall be used by the offeror in preparing the cost proposal. If the offeror uses labor category terminology other than that used in this provision, the offeror must provide a matrix clearly relating their proposed labor categories to those in this provision.

LABOR CATEGORIES	**Hours**
Program Manager	47,000
System Engineer	385,400
Electrical Engineer	216,200
Mechanical Engineer	47,000
Computer Scientist	75,200
Computer Specialist	131,600
Electronic Technician	235,000
Project Coordinator	47,000
Cad Specialist	56,400
Cad Operator	47,000
Adm/Clerical/Proj Coord	84,600
Misc Support	94,000
CM Specialist	18,800
TOTAL	1,485,200

L-16 SOW SECTION 2.1 NRL TECHNICAL SPECIFICATIONS AND DOCUMENTS

The documents referenced in SOW Section 2.1 are available for viewing in the Contracting Office, Code 3230, Naval Research Laboratory, 4555 Overlook Avenue, SW, Washington, D.C. 20375. If prospective offerors wish to view the documents they must contact Dan Brinkworth, at (202) 767-6746, to schedule an appointment. Review of these documents must be completed two weeks prior to the solicitation closing date.

After contract award, the documents can be obtained from the designated COR. In no event shall failure to view the documents be grounds for a claim after contract award.

SECTION M

EVALUATION FACTORS FOR AWARD

M-1 EVALUATION

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. Although technical considerations are more important than cost, the closer the technical scores of the various proposals are to one another, the more important cost considerations become.

M-2 EVALUATION FACTORS FOR AWARD

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor.The technical factors are listed in decending order of importance.

Technical Factor (1)—

1. Maintenance Activity

The offeror will be evaluated on his ability to maintain and enhance SSDD special test equipment, satellite test beds, and ground station equipment. The offeror must demonstrate his experience with updates, enhancements and retrofits to existing equipment. The offeror must demonstrate his experience in maintaining a wide variety of analog and digital equipment specifically developed to support SSDD satellite, ground and tactical systems. This maintenance includes both the repair and modification of the hardware and the enhancement of software used to control the equipment and log test results.

2. Networks and Network Support

The offeror will be evaluated on his demonstrated ability to manage, design, configure and maintain the SSDD's computer networks. The offeror must demonstrate their ability to install, configure, test and maintain a complex network (WANs and LANs) composed of all of these types of equipment and designing new network segments as needed. The offeror must be capable of coordinating their network activities with organizations external to the SSDD and ensuring that a consistent and compatible network structure is maintained. The offeror must demonstrate their ability to assist in the design, implementation, test and maintenance of ATM networks utilizing state-of-the-art routers, switches, hubs and bridges. The offeror must also demonstrate their ability to manage and trouble shoot networked computer systems consisting of over 100 nodes running various operating systems.

3. Satellite and Space Systems Development Experience

The offeror will be evaluated on their demonstrated ability to rapidly design, integrate and test low earth orbiting satellites with expected lifetimes in excess of three years. These satellites must be based on a bus-based architecture using radiation hardened components with on-board processing for command and control. Experience with military satellites is especially desirable.

4. Ground Station Development Experience

The offeror will be evaluated on their demonstrated ability to design, fabricate, install and maintain satellite ground stations and ground station equipment based on NRL's Blossom Point architecture. The offeror must demonstrate their experience with both mobile and fixed satellite ground stations. Preference will be given to offeror's with ground station design incorporating semi-autonomous operation with multiple simultaneous satellite data exchange.

5. Tactical Communications Systems

The offeror will be evaluated on his demonstrated experience to support experiments and Advanced Warfighting Exercises (AWE's) involving the Army's tactical internet and Naval digitization initiatives. The offeror must be capable of deploying a team of subject matter experts to the field, correct technical anomalies discovered during the course of the exercise, and provide support to users.

Technical Factor (2)—

1. Management Organization

The offeror will be evaluated on the relationship of the program to the profit center structure of the corporation. The ability of the program manager to direct corporate resources to accomplish efforts and the reporting structure of the program manager will also be evaluated. The inter-relationships within the offeror's organization as related to the program and the offer's relationship with team members will also be evaluated. Finally the offer's corporate commitment willingness and ability to commit internal resources to accomplish the program will be evaluated.

2. Risk and Risk Mitigation

The offeror will be evaluated on how well he recognizes and accesses potential risks and hazards associated with assuming the ongoing efforts described in the Statement of Work. The offeror will also be evaluated on his plan to mitigate these risks and assure a smooth transition from the incumbent contractor.

3. Facilities and Equipment

The offeror will be evaluated on the availability of current state-of-the-art facilities and equipment. The offeror will be evaluated on whether these facilities and equipment are corporately owned, leased, or the property of a team member. Finally, the offeror will be evaluated on their ability to either use or acquire new resources to satisfy program requirements.

Technical Factor (3)—

The proposal will be evaluated on the offeror's demonstrated ability to provide personnel with: (1) the appropriate qualifications set forth in the Statement of Work; (2) actual relevant experience in the technical and scientific areas set forth in the Statement of Work; and, (3) the ability to obtain a SECRET clearance of key personnel prior to commencing work.

Technical Factor (4)—

Past performance will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Section L-11 and other sources if available. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iii).

II. COST

(1) PROPOSED OVERALL COST

Proposed estimated cost and fixed-fee.

(2) THE REALISM OF THE PROPOSED COST

Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal.

The Government may adjust the proposed cost for purposes of evaluation based upon the results of the cost realism evaluation.

STATEMENT OF WORK

1.0 INTRODUCTION

The Naval Center for Space Technology (NCST) located at the U.S. Naval Research Laboratory (NRL) in Washington, DC, is the designated lead laboratory for Navy space programs. NCST has the mission to "preserve and enhance a strong space technology base and provide expert capabilities in the development and acquisition of space systems which support Naval missions." The Space Systems Development Department (SSDD), a department within NCST, has the primary responsibility to develop space and aerospace systems and to actively pursue emerging technologies in an effort to advance space and aerospace system development.

The SSDD defines system requirements based on overall mission objectives; develops alternative system architectures; designs and develops systems and subsystems; and implements technologies to achieve optimized, operational systems.

This Statement of Work (SOW) defines the technical and managerial tasks required to accomplish selected activities for present and future space and avionics programs of the SSDD. The SSDD has several programs at various stages in the development process. In addition, The SSDD is currently involved in the conceptual or design phases of a number of other advanced concepts projects that will be included in future generations of space and avionics systems.

1.1 SCOPE

This SOW defines the managerial and technical tasks to be performed by the selected Sustaining Engineering (SE) contractor. The scope of this SOW includes the areas of program management, documentation, systems engineering, space and aerospace systems, ground systems, technology transfer, facilities support, quality control, power system development, Radio Frequency (RF) support, integration and test activities, computer networking and system administration, equipment maintenance and advanced concept exploration and associated efforts required by SSDD to complete current programs and to support future SSDD projects and programs.

The selected SE contractor shall direct, perform and report on all tasks and activities covered by this SOW. Unless otherwise specified herein, the contractor shall furnish/procure all the necessary resources and supplies to accomplish the managerial and technical efforts described in this SOW.

2.0 APPLICABLE DOCUMENTS

The Contractor shall comply with the following specifications, standards, and publications as they apply to each SE task. The exact issues shown form a part of this specification. In the event a revision is not specified, the latest revision as of the date of this SOW shall apply. In the event of conflict between the referenced documents and this SOW, the requirements of the SOW shall apply.

2.1 SSDD Technical Specifications and Documents

Document Number	Description
STC-D-001	Spacecraft Product Assurance Program Plan
STC-D-002	Naval Center for Space Technology (NCST) Parts Program Requirements and Guidelines
STC-D-010	Preferred Parts List
SSD-D-059	NRL/SSDD Monthly Status Report Procedure
SSD-D-061	Procedure for the Preparation of Program Plans
SSD-D-072	Naval Center for Space Technology Document Style Guide
SSD-D-AS139	Qualified Parts List
SSD-D-AS214	Parts Program Requirements and Guidelines
SSD-D-AS303	Quality Assurance Program Requirements and Guidelines
SSD-D-AS322	Test Methods and Controls

(The above documents will be available for viewing in the Contracting Office, Code 3200, Naval Research Laboratory, 4555 Overlook Ave, SW, Washington, DC 20375-5326.) After contract award the documents can be obtained from the designated Contracting Officer Representative (COR).

2.2 Military/Department of Defense Specifications and Standards

Document Number	Description
DOD-E-8983	Electronic Equipment, Aerospace, Extended Space Environment, General Specification for
MIL-HDBK-343	Design, Construction, and Testing Requirements for One of a Kind Space Equipment
MIL-P-55110	Printed Wiring Boards for General Specification
MIL-HDBK-217	Reliability Prediction of Electronic Equipment
DOD-HDBK-263	Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies and Equipment
MIL-STD-275	Printed Wiring for Electronic Equipment
MIL-STD-461	Electromagnetic Emission Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-756	Reliability Modeling and Prediction
MIL-STD-881	Work Breakdown Structures for Defense Material Items
MIL-STD-1540	Requirements for Space Vehicles
MIL-T-31000	General Specification for Technical Data Packages

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Standardization Documents Order Desk, BLDG. 4D, 700 Robbins Ave., Philadelphia, PA 19111-5094, telephone number (215) 697-3321.)

2.3. Non-government Documents

2.3.1. American National Standards Institute (ANSI)

Document Number	Description
ANSI Y32.16	Reference Designations for Electrical and Electronic Parts and Equipment
ANSI Y14.5M	Dimensioning and Tolerancing
ANSI Y32.2	Graphic Symbols for Electrical and Electronic Diagrams

(Applications for copies should be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018.)

2.3.2. Electronic Industries Association (EIA)

Document Number	Description
RS-232	Interface Between Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange
RS-422	Electrical Characteristics Of Balanced Voltage Digital Interface Circuits
RS-423	Electrical Characteristics Of Unbalanced Voltage Digital Interface Circuits
EIA/IS-649	Configuration Management
EIA/IS-632	Systems Engineering

(Application for copies should be addressed to Electronic Industries Association, 2001 Pennsylvania Ave., NW, Washington, DC 20006.)

2.3.3. Institute of Electrical and Electronic Engineers (IEEE)

Document Number	Description
IEEE 488	IEEE Standard Digital Interface for Programmable Instrumentation

IEEE 802.3	Information Processing Systems - Local Area Networks - Part 3: Carrier Sense Multiple Access with Collision Detection
IEEE 1014	Standard for a Versatile Backplane Bus: VMEbus
IEEE 1394	High Performance Serial Bus

(Applications for copies should be addressed to the Institute of Electrical and Electronic Engineers Inc., 345 East 47th Street, New York, NY 10017.)

3.0 REQUIREMENTS

This section contains the detailed requirements for this effort. The Contractor shall accomplish these requirements using the guidelines and direction established by the references in Section 2.0, Applicable Documents, unless these guidelines are modified by the Contracting Officer's Representative (COR). No proprietary hardware or software shall be used for any task within this contract without prior written notification and approval of the COR.

3.1 Contract Phase-In Period

The Contractor shall phase its organization into the ongoing system development efforts being performed by the incumbent Contractor within 60 days after contract award. During this period, the Contractor must establish a trained and experienced work force, acquire adequate facilities and equipment, develop adequate procedures, and establish the program management controls and procedures required for accomplishing the tasks in this contract. Additionally, the contractor's personnel must become familiar with the ongoing efforts being performed by the SSDD and be ready to assume the work at the end of the transition period.

The Contractor shall designate the program manager or another individual from its organization as the single point of contact responsible for coordinating all transition activities. This individual will schedule and execute the transition for the contractor. This individual will keep the COR informed of the progress of the transition and of any problems that arise. All communication between the successful contractor and the incumbent regarding the transition shall take place via the COR. Any transition problems that can not be resolved will be referred to the CO.

3.2 Program Management

The contractor shall provide the program management, control, and reporting functions necessary to manage and direct the accomplishment of the efforts required under this SOW.

The contractor shall designate a program manager who shall have overall responsibility for the program and who shall act as the single point of contact with NRL for all matters pertaining to this SOW. The program manager shall keep the COR informed of the status of the technical and managerial efforts and expenditures on the contract by means of written monthly reports, by telephone conversations, and by meetings at the contractorís facility and at NRL.

The program manager shall have the authority to commit corporate resources to ensure the successful completion of authorized tasks. The program manager shall keep the COR informed as to its Corporate Organization by providing current organizational charts. This shall be reported under the appropriate CDRL.

3.2.1 Program Control and Status Reporting

The contractor shall establish and maintain a management system for control and reporting of the program and contract efforts including cost, schedule, and technical performance for the life of the contract. The management system shall be designed to assess technical achievement, to measure progress, and to determine and accrue costs accurately for each assigned task; and shall employ a Contract Work Breakdown Structure (CWBS) as described in MIL-STD-881. The system shall be capable of comparing actual versus planned performance and cost, and shall clearly illustrate program status. There shall be a direct correlation between the CWBS employed by the
SSDD for its reporting purposes and the CWBS developed by the contractor. Program technical, cost and schedule status shall be reported at the task level and summarized at the overall program level within each report. The CWBS shall be submitted under the appropriate CDRL item.

3.2.2 Monthly Status Reporting

The contractor shall provide SSDD with a Monthly Status Reporting (MSR) in accordance with SSD-D-059, Monthly Status Report Procedure. The following paragraphs detail the requirements that the contractor shall include in the MSR. The MSRís shall be submitted under the appropriate CDRL. The contractor shall provide SSDD with a CFSR monthly. The CFSR shall be submitted under the appropriate CDRL.

3.2.2.1 Contract Summary

The contractor shall provide highlights of significant actions that occurred during the reporting period relative to contract performance. Significant actions include any that will impact, or have impacted, the projected performance, cost or schedule of the SE Program effort.

The contractor shall provide information on deliveries, meetings and on scheduled versus actual work performed. Actual and projected slippage's shall be reported along with their actual and projected impact on overall contract performance. The status of GFE, materials, data items, travel and subcontracts must also be reported. The resultant Milestone Chart shall be submitted under the appropriate CDRL.

The contractor shall provide a monthly total of all on-site/off-site labor hours (which shall include subcontractor labor hours) broken down by task assignment. This shall be submitted under the appropriate CDRL.

3.2.2.2 GFE/Subcontracting

The status of materials, Government Furnished Equipment (GFE), data items, and subcontracting must also be reported. The contractor shall include an update of any previously reported unresolved problems or issues. This report shall be submitted under CDRL Item A007. The contractor shall maintain an accurate inventory of all GFE. A complete listing describing all GFE and its location shall be prepared and made available to the COR on an as needed basis. The report shall be delivered to the COR on a quarterly basis as required under the appropriate CDRL.

3.2.2.3 Financial Management

The contractor shall provide the management resources required to maintain the financial reporting system and assure delivery of contractual items.

The contractor shall provide information on contract financial and staffing levels. The cost data shall be reported in accordance with Department of Defense (DoD) Data Item Description (DID), DI-F-6010A, Cost/Schedule Status Report (C/SSR), tailored to the SSDD requirements to include current month as well as cumulative month cost data, and manpower usage reporting. The cost data shall be correlated to the CWBS elements. A narrative explanation shall accompany the charts. This data shall be submitted with the MSR under the appropriate CDRL.

3.2.2.4 Subcontract Management

The contractor shall provide the technical and financial oversight of subcontracts to ensure success of the SSDD projects being supported.

3.2.3 Computer Networking and System Management

The contractor shall provide both hardware and software engineering expertise to SSDD to enable it to operate and maintain a very large and sophisticated computer network composed of LANS (Local Area Networks) and WANS (Wide Area Networks). The contractor shall maintain and operate the variety of protocols used by SSDD which includes, but is not limited to, TCP/IP, FDDI, DECnet, DISnet, APPLETALK, HTTP and ATM. Also included in the SSDD network hardware are a variety of diskless workstations manufactured by Network Computing Devices (NCD).

The contractor shall support the design, documentation, installation, and maintenance of systems for use in DISNet. This shall include switch and router configuration, installation of interfaces to cryptography equipment, support for EMASS and Sun HPC installation, configuration and system management, configuration and system management for DISNet hosts, installation of cable, fiber, and devices for communication circuits. The contractor shall maintain technical drawings and documentation for entire network.

Due to the nature of the business conducted by SSDD a variety of networks are operated. As such, personnel provided to support this effort are to be familiar with all aspects of classified network operation and the protocols to which they must adhere.

The contractor shall provide personnel capable of designing new or enhancing existing networks. The contractor shall also provide personnel capable of servicing, installing, troubleshooting, and maintaining all of the SSDD network hardware and software.

The contractor shall provide personnel capable of executing systems management functions for a large Open FMS DSSI cluster. This system is extremely sophisticated and due to itís network arrangement also requires a significant degree of network management skills as well. The contractor shall provide knowledgeable of DEC Alpha hardware architecture and capable of trouble shooting disk subsystems.

3.2.4 Facilities Operation and Maintenance

The contractor will be responsible for the operation and maintenance of a 25,000 square foot building located on NRL property. The building houses administrative offices, computer hardware rooms, soldering labs, EEE parts storage rooms, of the contractor as well as an assortment of sub-contractors and other contractors who provide support to the SSDD.

3.2.4.1 Maintenance of Building T970

The contractor will be responsible for the total operation and maintenance of a government furnished 25,000 square foot building located on NRL property, known as Building T970.

3.2.4.2 Maintenance of Special Facilities

The contractor shall also provide limited maintenance support for other special facilities of the Naval Center for Space Technology. These facilities consist of a two

story secure office complex in the Northwest corner of Building A59 (approx. 28000 square feet), a secure third floor office/computer complex in Building 65 (approximately 11,500 square feet), a secure laboratory/office complex consisting of Room 121 in Building 59, and a two floor facility in Building 125 (approximately 4,500 square feet) and a security single floor facility in Building 55 (approximately 1395 square feet).

The contractor shall purchase material and property (which may include facilities, and other plant equipment (OPE)) to support the maintenance and operation of SOW tasks.

3.3 Documentation

As hardware and software is designed, developed, and modified under this contract, the Contractor shall compile a level two technical data package that completely describes the article as described in MIL-T-31000, General Specification for Technical Data packages. All documentation developed under this contract shall be delivered in both hard copy and on electronic media approved by the COR.

The contractor shall also maintain the configuration of all data and drawings throughout the design process and hold periodic reviews to ensure that all parties involved in the design process have an opportunity to comment and review the documentation package. The following paragraphs describe and illustrate the specific duties that are included as part of this requirement.

3.3.1 CAD/CAM Support (Facility Operation)

The Contractor shall provide computer-aided design and drafting support. The Contractor shall provide trained personnel capable of conducting electrical and mechanical design and drafting. These personnel shall be proficient with the Auto CAD and Mentor CAD/CAM hardware and software. The design and drafting support shall include printed circuit board layouts, circuit card assembly drawings, schematics, part lists, mechanical assembly drawings and other design documents. The contractor shall provide training as required to end users and other government selected users. The contractor shall be responsible for providing the necessary computer hardware compatible with current SSDD systems to provide an adequate level of support for each assigned project.

Unless otherwise directed by the COR, design efforts under this task shall be conducted to conform with applicable MIL-Standards. Specifically, printed circuit board (or printed wiring board) layout/design shall comply with MIL-STD-275. The documentation provided by the Contractor shall comply with MIL-STD-100 and dimensioning shall comply with ANSI Y14.5M. Drawing packages under this task will be generated to MIL-T-31000 “Development Level” standards. These drawing packages shall be provided in accordance with Exhibit A, Contract Data Requirements List (CDRL).

3.3.2 Graphics and Illustrations

The contractor shall prepare presentation quality graphics and illustrations in black and white as well as color depicting satellites, antennas, ground stations, test equipment, and various other aspects of space, communication and tracking programs. The contractor shall also have the capability to scan photographs and drawings digitally into an electronic format for use in documents and presentations. These graphics shall be provided in accordance with CDRL A010.

3.3.3 Technical Documentation Generation

All technical documentation shall be prepared in accordance with SSD-D-072, Naval Center for Space Technology Document Style Guide.

3.3.3.1 System Development Specifications

The contractor shall update and maintain the existing system development specifications. In addition, the contractor shall prepare system development specifications for advanced development programs. Specifications shall be submitted under CDRL Item A011. The specifications shall be revised to reflect changes to the systems as the systems evolve as approved through the SSDD system design process. The revised specifications shall be submitted thirty (30) days after the associated system design reviews.

3.3.3.2 Interface Control Documents

The contractor shall update and maintain external and internal Interface Control Documents (ICD), which specify interface requirements for integration of various systems. The documents shall reflect the results of the applicable design reviews.

The contractor shall update and maintain Interface Wire Lists (IWL) for individual systems to enable integration and test planning and performance. The IWLs shall define the inter-connections of subsystem/equipments with each other and other systems, and shall be referenced to the ICDs to assure conformance with specification requirements. IWLs and ICDs shall be submitted under CDRL Item A012.

3.3.3.3 Other System Technical Documentation

The contractor shall prepare, update, and maintain other system technical documentation. A representative sample of these documents would include:

- Technical Reports. Examples of this type of system documentation are system analysis reports, system requirements allocation reports, system test reports, and document lists.

- Specification Trees. This includes the preparation and maintenance of all specification trees related to the program documentation task.

- System Design Review Reports. These reports shall document the system design review results, action item assignments, and action item resolutions.

- System Drawing Packages. These include the drawings, procedures, materials, and processes documents and lists that define a specific system design.

- Requirements Tracking Packages. These include packages that trace system specification to design requirements. This tracking will be performed to ensure that "requirements creep" does not artificially increase the cost of new systems.

- Concept of Operations Documents. These documents include all pertinent information on the theory of operation of a system, how it will be operated and how it will be maintained.

3.3.4 Configuration Management

SECNAVINST 4130.2, Department of the Navy Configuration Management (CM) policy, defines a systematic means for documenting and controlling the configuration of material items in terms of their physical and functional characteristics. The Contractor shall perform the CM efforts necessary to maintain control of the configuration of all the documentation, data, software, and other materials produced under this contract. The Contractorís CM systems shall be completely compatible with the existing NRL CM system.

3.3.5 Data Management

Data Management (DM) is defined in SECNAVINST 4210.9, Acquisition and Management of Technical Data and Computer Software, and comprises the tools necessary for the identification, coordination, collation, validation, and integration of technical data throughout the life cycle of a project. The Contractor shall perform the

data management efforts necessary to procure, produce, support, operate, and maintain the configuration items produced under this contract.

3.3.6 Technical Reviews

The Contractor shall be responsible for conducting all the technical reviews and audits for the efforts described within this contract. A representative sample of these reviews will include:

- Systems Requirements Review (SRR)
- System Design Review (SDR)
- Software Specification Review (SSR)
- Preliminary Design Review (PDR)
- Critical Design Review (CDR)
- Technical Interchange Meetings

The Contractor shall videotape selected reviews and submit the videotape under the appropriate CDRL item.

3.3.7 Web Page Development

The contractor shall provide the required technical expertise to develop web pages for various NCST programs on an as needed basis. The contractor will provide personnel with knowledge of Mac/PC/NT based web development tools such as Claris Home Page and with writing CGIís in either Perl or OpenVMS Digital Command Language (DCL) as well as a working familiarity with the Ohio State University (OSU) Web server for OpenVMS.

3.3.8 Project Plans/Schedules

The contractor shall generate and maintain schedules for each task assignment in both GANTT and PERT format. The contractor shall ensure that adequate resources are assigned to the various tasks to report on any deficiencies. These statement shall be submitted under the appropriate CDRL.

3.3.9 On-Line Resource Service

The contractor shall provide an On-Line resource service that will allow users to access to technical specifications, project schedules, reference materials and other resource documents. This On-Line resource would “digitize” a documentation center or technical library.

3.4. Systems Engineering

The Contractor shall provide a systems engineering team to plan, coordinate, and integrate systems engineering, design analysis, risk mitigation, and other engineering related efforts as required and directed by the COR.

3.4.1. System Definition

The Contractor shall identify and characterize (in terms of performance, weight, internal/external interfaces, specifications, etc.) all major components of a system design. This shall include: mechanical structure, command and control, experiments, electrical power generation/distribution, attitude control, reaction control, ordnance, data handling and distribution, communication, launch adapter, orbital transfer module, ground/space component distribution, and other system related components. This shall be done on the basis of an explicit, documented evaluation of the tradeoffs among alternatives involving the degree of assurance of achieving all program objectives (including performance and reliability/lifetime) and system acquisition cost.

3.4.2. System Analyses and Planning

The contractor shall analyze current and planned system architectural concepts. Plans, implementation, and operational analyses of current and future uses and shortfalls shall be identified. The contractor shall also identify technologies that should be pursued to improve the systems architectural planning process. Also, the contractor shall assist in the development and maintenance of applicable concept plans, white papers, Concept of Operations (CONOPS) and standard operating procedures.

3.4.3. Technical Assessments

The contractor shall prepare technical assessments and engineering analyses to identify, recommend, and implement resolutions of critical design or performance deficiencies. The contractor shall provide system level integration test plans and procedures; identify and report deficiencies; support hardware and software design reviews; identify, analyze or develop decision support, simulation or modeling support activities; and provide short-term engineering analyses and quick reaction studies. The contractor shall also assist in system survivability analyses and in analyzing and resolving protocol issues. These analyses shall be submitted under the appropriate CDRL.

3.4.4. Independent Verification and Validation (IV&V)

The Contractor shall participate in the Independent Verification and Validation (IV&V) of space and ground SSDD system hardware and software. The IV&V efforts will ensure that the requirements levied on the system have been fully satisfied by the design and that no additional functionality has crept into the system. The IV&V effort will focus on all areas of the design, including: requirements traceability, maintainability, testability, interface analysis, and stress testing. Additionally, the IV&V efforts will validate system and subsystem performance and functionality. The results of these IV&V efforts shall be documented and submitted under CDRL A015.

3.5 Space Systems

The Contractor shall provide the engineering resources necessary to accomplish the following tasks related to the design, development, fabrication, and test of SSDD space systems.

3.5.1 System Design and Testing

The Contractor shall design, fabricate, test and document advanced NRL spacecraft launch devices and ground systems to satisfy the requirements generated under this contract. Both system and subsystems designs shall be in accordance with all system/subsystem performance specifications. The Contractor shall develop breadboards and simulations to prove the feasibility of advanced concepts and to reduce the risk of developing these new system architectures.

The Contractor shall explore new methods and concepts to test and characterize the performance of SSDD systems. These testing methods shall emphasize a more thorough characterization of the performance of the system, detection of anomalies, and a reduction in the wall-clock time required to complete the testing.

The Contractor shall provide software and firmware resources necessary for the development of software used in satellite systems and satellite ground. This shall include software that will be used for mission support, tool development, real-time applications, automatic test equipment, simulations and modeling, databases, and other related applications. The Contractor shall design, develop, document, and maintain this software at NRL and its field sites or at the Contractor's facilities. The Contractor shall integrate all software developed and shall use and maintain the latest software configurations on all test and development equipment unless otherwise directed in writing by the COR.

The contractor shall provide as required, software engineering expertise for the design and architecture of software systems for real-time hardware command and control, for the automated capture of control, operational and/or performance C data, and the off-line evaluation, sort and display of data and results.

The contractor shall provide as required, technical and/or analytical support for the integration and testing of software systems and of combined software and hardware systems. The technical support will range from code walkthrough support, generation and evaluation of software metrics, evaluation of software and software/hardware implemented algorithms, and performance evaluation of algorithms on command, control and operational data.

3.5.2 Spacecraft Command and Telemetry Systems

The Contractor shall provide the engineering resources to design, fabricate, integrate, document, and test Command and Telemetry Systems (C&T) for NRL space systems. Each T&C system development effort shall be accomplished in the following three phases:

- Phase I, Brassboard Development, shall result in delivery to NRL of one fully redundant brassboard unit, its associated design documentation and supporting analysis, and test reports. This phase shall also include development of the factory test equipment (FTE) required to test the brassboard units, and the subsequent qualification and flight units. Reports shall be submitted under the appropriate CDRL item.

- Phase II, Qualification Development, shall result in delivery of one fully redundant qualification unit that has been subjected to and passed the qualification tests, plus the associated design documentation, analysis reports, and test procedures and reports. Reports shall be submitted under the appropriate CDRL item.

- Phase III, Flight Production, shall result in delivery of one fully redundant flight unit that have been subjected to and passed the NRL--approved Acceptance Test Procedures. Reports shall be submitted under the appropriate CDRL item.

All TT&C systems developed under this task shall conform with the NRL document STC-D-001 Spacecraft Product Assurance Program Plan.

3.5.3 Electrical Power Subsystem Development (EPS)

The Contractor shall provide the personnel, material, and facilities necessary to support the EPS tasks defined within the following paragraphs. The Contractor shall provide in accordance with the appropriate CDRL.

3.5.3.1 Electrical Power System/Subsystems

The Contractor shall provide the engineering resources required to design, fabricate, integrate, document, and test the monitor and control circuits that distribute electric power within the satellite.

The Contractor shall provide a detailed reliability evaluation over the complete range of thermal vacuum, launch vibration, and flight environments for all circuits. These devices shall be subsequently used for qualification testing in more severe environmental conditions than expected in the actual flight environment. This includes the integration and test of the EPS devices with the flight configured satellite.

3.5.3.2 Operation of Battery Test and Engineering Facility

The Contractor shall maintain and operate the satellite battery test and evaluation facility located at NRL. This effort shall include investigating specialized battery technologies and testing nickel cadmium, nickel hydrogen, and other types of batteries intended for satellite application. The Contractor shall conduct life cycle and other types of tests utilizing NRL furnished equipment. Battery performance data shall be recorded and periodically summarized. The Contractor shall also design test equipment and fixtures for specific battery applications. This data shall be submitted under the appropriate CDRL.

The Contractor shall provide day-to-day maintenance of the battery test facility, located at NRL, and coordinate changes and/or enhancements to the facility and its operation.

3.5.3.3 Harness Design

The Contractor shall design, assemble, and test wire harness assemblies, select and integrate connectors, and provide components for the EPS. The Contractor shall be responsible for the quality assurance and screening of vendor produced connectors, cables, and components.

The Contractor shall produce engineering documentation, submit reports during environmental and integration testing, and shall assist in the establishment of test criteria to comply with MIL-STD-461. These reports shall be submitted under the appropriate CDRL.

3.5.3.4 Experiment Support

The contractor shall design, fabricate, test and document experimental power systems. These power systems shall incorporate the latest technological advancements in the area of satellite power. The contractor shall then assist in the

integration of these experiments into the host satellite. The contractor shall also provide the technical resources to collect and analyze the data obtained from the experiment

3.5.4 Attitude Control Systems

The Contractor shall provide the engineering resources to design, fabricate, integrate, document, and test Attitude Control Electronics (ACE) for NRL space systems. Each ACE development effort shall be accomplished in the following three phases:

- Phase I, Brassboard Development, shall result in delivery of one fully redundant brassboard unit, its associated design documentation and supporting analysis, and test reports. This phase shall also include development of the factory test equipment (FTE) required to test the brassboard units, and the subsequent qualification and flight units. Reports shall be submitted under the appropriate CDRL item.

- Phase II, Qualification Development, shall result in delivery of one fully redundant qualification unit that has been subjected to and passed the qualification tests, plus the associated design documentation, analysis reports, and test procedures and reports. Reports shall be submitted under the appropriate CDRL item.

- Phase III, Flight Production, shall result in delivery of one fully redundant flight unit that have been subjected to and passed the Acceptance Test Procedures. Reports shall be submitted under the appropriate CDRL item.

All ACE systems developed under this task shall conform with the NRL document STC-D-001, Spacecraft Product Assurance Program Plan.

3.5.5 Reaction Control Systems

The Contractor shall provide the engineering resources to design, fabricate, integrate, document, and test Reaction Control Electronics (RCE) for NRL space systems. Each RCE development effort shall be accomplished in the following three phases:

- Phase I, Brassboard Development, shall result in delivery of one fully redundant brassboard unit, its associated design documentation and supporting analysis, and test reports. This phase shall also include development of the factory test equipment (FTE) required to test the brassboard units, and the subsequent qualification and flight units. Reports shall be submitted under the appropriate CDRL item.

- Phase II, Qualification Development, shall result in delivery of one fully redundant qualification unit that has been subjected to and passed the qualification tests, plus the associated design documentation, analysis reports, and test procedures and reports. Reports shall be submitted under the appropriate CDRL item.

- Phase III, Flight Production, shall result in delivery of one fully redundant flight unit that have been subjected to and passed the Acceptance Test Procedures. Reports shall be submitted under the appropriate CDRL item.

All RCE systems developed under this task shall conform with the NRL document STC-D-001, Spacecraft Product Assurance Program Plan.

3.5.6 Ordnance Control Systems

The Contractor shall provide the engineering resources to design, fabricate, integrate, document, and test Ordnance Control Systems (OCS) space systems. Each ordnance system development effort shall be accomplished in the following three phases:

- Phase I, Brassboard Development, shall result in delivery of one fully redundant brassboard unit, its associated design documentation and supporting analysis, and test reports. This phase shall also include development of the factory test equipment (FTE) required to test the brassboard units, and the subsequent qualification and flight units. Reports shall be submitted under the appropriate CDRL item.

- Phase II, Qualification Development, shall result in delivery of one fully redundant qualification unit that has been subjected to and passed the qualification tests, plus the associated design documentation, analysis reports, and test procedures and reports. Reports shall be submitted under the appropriate CDRL item.

- Phase III, Flight Production, shall result in delivery of one fully redundant flight unit that have been subjected to and passed the Acceptance Test Procedures. Reports shall be submitted under the appropriate CDRL item.

All ordnance systems developed under this task shall conform with the NRL document STC-D-001 Spacecraft Product Assurance Program Plan.

3.5.7 System Test Equipment

The Contractor shall provide the engineering resources to develop, enhance, and maintain NRL test resources.

3.5.7.1 Test System Support

The Contractor shall maintain and enhance the hardware and software developed by NRL for testing space systems, subsystems and other related equipment. The Contractor shall also provide the engineering resources to integrate the test equipment to NRL space systems and assist in the system test, characterization, and evaluation. The Contractor shall also develop new equipment to test, characterize, and evaluate future NRL space systems, subsystems and other related equipment.

The Contractor shall provide maintenance support to maintain the NRL computer systems used to design, test, or operate SSDD satellites or ground systems. This shall include the systems hardware, software, and network communications equipment. The Contractor shall respond to maintenance requests within a three hour period and complete repairs in a timely manner. The repair shall include the use of new or reconditioned parts necessary to restore or enhance existing hardware, software, and network communications equipment to proper working order.

The Contractor shall calibrate all test equipment at the interval recommended by the equipment manufacturer. The Contractor shall maintain calibration logs on all test equipment. These logs shall be submitted under the appropriate CDRL item.

3.5.7.2 Special Test Equipment Development/Maintenance

The Contractor shall provide support, test equipment, and material required to develop, enhance, maintain, and operate Special Test Fixtures (STF) developed for testing space systems and other related equipment. A representative sample of these STFs include:

- Data Link Data Compressor (DLDC)
- Bus Ear Mouth (BEM)
- Automated Range and Synchronization Test (ARAST)
- Pulse Timing Generator (PTG)
- Range and Synchronization Test Unit (RASTU)
- Range and Synchronization STF (R&S STF)

3.5.8. RF Support

The Contractor shall design, develop, fabricate, assemble, test, integrate, and operate RF ground components for use with NRL space systems, commercial space systems, and related hardware/software.

3.5.8.1 RF Space Flight Systems and Component Prototype Design, Test and Evaluation

The Contractor shall initiate the preliminary design of RF space flight systems and components. This detailed design activity shall include: (a) defining detailed electrical and mechanical interfaces, critical operational parameters, sizes, and weights; (b) building and testing breadboards and prototypes; (c) verification testing required to prove preliminary design concepts; (d) defining and acquiring long-lead materials; (e) initiating the prototype documentation effort, (f) defining functional, performance and qualification tests, and (g) presenting formal design results at a preliminary design review (PDR).

3.5.8.2 RF Space Flight System and Component Development and Qualification

The Contractor shall perform the final design and integration of flight RF subsystems and components. This activity shall include system validation to prove that the final design performs and interacts in a simulated space flight environment in accordance with design specifications. The Contractor shall: (a) complete the prototype design and documentation effort, and (b) make a formal presentation of the design results and implementation at a critical design review (CDR).

After NRL review and approval on design approaches, objectives, and specifications, the Contractor shall initiate fabrication, test, and qualification of the RF space flight subsystems and components. The Contractor shall provide continuing engineering support to the developmental effort throughout the fabrication, test, and qualification phases to prove that the implemented design is feasible, sound, and cost-effective. The Contractor shall support the transition of the final RF subsystem and component designs to a NRL-selected industry source.

3.5.8.3 Radio Frequency/Electromagnetic Interference (RFI/EMI) Testing

The Contractor shall conduct RFI/EMI testing of SSDD satellite and ground hardware. All RFI/EMI testing shall conform to MIL-STD-461. The Contractor shall

also perform TEMPEST testing on various pieces of hardware and use appropriate Red/Black installation techniques where necessary to prevent unwanted emissions.

3.5.9 Optical Space Systems

The contractor shall provide the necessary skills and resources to conduct research associated with using lasers in satellite systems for various purposes, such as ranging, geo-positioning, communications, etc., to accurately determine precise performance characteristics for satellite-to-ground and satellite-to-satellite systems. Projects may draw heavily on other government experience in related areas. The contractor's efforts shall include the study and development of techniques and approaches; development of terrestrial test-beds to replicate on-orbit systems; analysis of precision satellite positioning and calibration methods; investigation of GPS related performance and independent measurement techniques; field testing and verification of selected models and methods; analysis of field testing; reports on the results of field tests and comparisons with models; and recommendations. The contractors support shall include initial research into possible techniques; design, development and proof-of-concept demonstrations; on-site data collection and experimental engineering functions to provide research data; optical test and analysis functions including laser emitter and detector characterization, receiver and transmitter design, build, test and evaluation, and similar electronic laboratory test functions; automated test support functions. Experiments and exercises are to be conducted in CONUS and OUTUS. Contractor support shall include experiment engineering, definition of resources and testing requirements/test goals, test site evaluations, collection site and equipment planning activities, arrangement of logistics with US and foreign military and civilian agencies, equipment configuration and operation, data collection from land/sea/air platforms, documentation of collected data, analysis of collected data, and evaluation/correlation of collected data.

3.6 Ground Station Development

The contractor shall provide engineering support for ground station development. Ground Stations may be used for a variety of tasks ranging from UAV (Unmanned Air Vehicle) and UCAV (Unmanned Combat Air Vehicle) ground stations to remote, autonomous ground stations that provide mission planning, command and control to communication relays, data processing and dissemination. Engineering support shall focus on providing a high degree of automation that requires minimal manning for operations.

3.6.1 RF Ground System and Component Engineering

The Contractor shall design, fabricate, and test RF ground station equipment capable of automatically controlling Commercial Off-The-Shelf (COTS) and modified

off-the-shelf (MOTS) tracking antenna systems. The Contractor shall then integrate these systems into advanced ground stations and ensure that communications links are established to control NRL spacecraft and receive payload data. These ground subsystems and components shall interface with both existing and anticipated NRL digital data handling systems. The primary purpose of the ground subsystems and components will be to provide command and control of spacecraft; secondary usage of the ground subsystems and components may include analytical data processing and distribution. The ground subsystem and components may operate at VHF, UHF, SHF, or EHF frequencies, depending upon the requirements of the spacecraft. Additionally, the Contractor shall work in concert with NRL and other agencies to define and increase levels of autonomy in the daily operation of the ground subsystems and components.

3.6.2 Enclosure Development

The contractor shall provide the design, development and testing of enclosures that may be used to house mobile command and control centers or remote automated ground relay stations. Enclosure types include relocatable (moved in pieces), transportable (moved in total by ship or plane) and/or highly mobile (small, self propelled) systems.

3.6.3 Next Generation Tactical Communications

The contractor shall design, develop, test, and demonstrate advanced, state-of-the-art communications equipment that represent the next generation capabilities in tactical communications. The contractor shall conduct surveys and studies of the latest emerging technologies to determine its applicability to advanced communications programs. The contractor shall provide engineering support in developing prototypes that demonstrate the latest technology. Technologies suitable for the battlefield include systems such as cellular phones, Personal Communications Systems (PCS) data systems, and chaos theory based waveforms.

3.6.4 Antenna Development

The contractor shall design, develop, test and demonstrate antennas based on new, advanced technologies. Types of antennas to be considered include antennas for individual Warfighters, antennas for mobile platforms (vehicle, ships, aircraft) antennas for satellites, and antennas for satellite ground stations. Frequency bands shall range from HF, VHF, UHF, L-Band, through Ku_band, Ka-Band and Q-Band. Technologies to be considered include whips, horns, dishes, and phased arrays. There is particular interest in Ku and Ka-Band antennas usable with VSAT systems. A primary application area includes, but it not limited to warfighter connectivity to airborne relays.

3.7 Tactical Communications Systems

3.7.1 Fiber Optic Technologies

The contractor shall design and develop fiber optic technologies. The technologies shall be used to transfer data between various computer systems to reduce weight, space and power consummation, decrease susceptibility to EMI and to increase speed of data dissemination within a vehicle or platform.

3.7.2 Radio and Data Communication Systems and Subsystems

The contractor shall design, develop and test hardware and software for radio and data communication systems that will be incorporated into tactical platforms. The contractor shall design, develop and test RF and communications systems to support new waveforms and protocols. The contractor shall also redesign existing systems to reduce size, weight and power requirements. The contractor shall study and develop systems to increase capabilities or add new capabilities to existing platforms. The contractor shall also develop, design and test subsystems such as transceivers on PCMCIA cards for incorporation into laptops. The contractor shall design, develop and test miniaturization techniques and use emerging cellular communication technologies to enhance tactical communication capabilities.

3.7.3 VSAT Architectures and Terminal Development

The contractor shall study, develop and test VSAT (Very Small Aperture Terminal) systems and/or subsystems that support Fleet and battlefield communications. Higher frequency bands such as Ku-band and Ka-Band shall be emphasized. The contractor shall analyze communication architectures within DoD and Government in order to define equipment that can be prototype and demonstrated. VSAT analyses shall include studying information and data flows in connecting network systems.

3.7.4 Command and Control (C2) System Development

The contractor shall develop, design, demonstrate and test development technologies for communications, situation awareness and fire control in airborne and surface vehicles. This shall include intranet techniques within the vehicle or platform as well as vehicle-to-vehicle intranet communications. The contractor shall provide engineering support in the design, development and implementation of systems and subsystems that may be used by federal law enforcement agencies. Subsystems development may include communication, command and control, situational awareness in a mobile or field configuration. The contractor shall design, develop, test and demonstrate tactical command center for various user communities. These may

include ground, surface and airborne centers. These may also require integration into existing command structures to complete replacement of architecture to support new requirements.

3.7.5 Laser Comms

The contractor shall design, develop, test and demonstrate laser communication technology. Reuse of existing technologies for new applications or for development of new capabilities. Application areas shall include satellite laser ranging through point to point terrestrial, airborne, and satellite communications.

3.7.6 Networking Tasks

The contractor shall design and develop network architecture to support existing requirements as well as new requirements as a result of emerging technology. The contractor shall perform studies and analysis of network techniques, network simulation, node development and protocol development and connection management across terrestrial and wireless systems. The contractor shall also develop software to implement the protocols and techniques resulting from these studies.

3.7.7 Integration of COTS/GOTS Products

The contractor shall provide support to integrate COTS and GOTS products with other COTS and GOTS products or in some cases with custom products in order to support emerging requirements.

3.7.8 Battlefield (Mobile) C4I Systems and Subsystems

The contractor shall design, develop, test, and demonstrate advanced C4I (Command, Control, Communications, and Intelligence) systems and subsystems. The contractor shall support concept explorations of new, emerging hardware and software components through integration into C4I prototypes and testbeds. The contractor shall develop C4I concepts into qualification systems or subsystems suitable for operational testing. The contractor shall integrate new and existing subsystems appropriate for stated mission requirements. Integration into existing command structures for ground, surface, and airborne platforms may be required or complete replacement of architectures to support new requirements may be required. Subsystems may comprise numerous functions such as communications (terrestrial, wireless, and satellite), networking, processing, archiving, security, autonomy, and platform control.

3.7.9 Air Warrior Internet/Intranet Development

The contractor shall develop, design, test, and demonstrate communication technology using COTS products in Internet communications, situation awareness, fire control for airborne and surface platforms. This shall include intranet techniques within a platform, as well as platform-to-platform intranet communications.

3.7.10 Demonstration and Exercise Support

The contractor shall provide engineering support in the design, development, and implementation of systems and subsystems that are used in demonstrations and Warfighting exercises. Demonstrations shall include DoD organizations as well as Federal agencies such as federal law enforcement. Warfighting exercises may include experiment such as Urban Warrior, Joint Warfighter Interoperabitliy Demonstrations (JWIDs) Army Warfighting Experiments (AEWs) and Ulchi Focus Lens. Subsystem development may include communication, command and control, and situational awareness in mobile or field configurations.

3.8 Advanced Concept Studies

The Contractor shall investigate at direction of the government, analyze, assess, and report on advanced concepts in space, airborne and ground systems. This effort shall include the following representative types of studies: theoretical investigations, modeling, materials analysis, reliability, survivability, manufacturability, availability, safety, manufacturing requirements, schedule planning, risk assessment, prototype demonstrations, and critical cost analysis. The Contractor shall provide periodic updates on the progress of these studies and submit a final report at the conclusion of each study under the appropriate CDRL.

3.9 Advanced Technology Demonstration (ATD)

The contractor shall provide engineering resources to support a variety of Advanced Technology Demonstrations. Analyses shall be performed to identify difficulties and to identify optimum configurations and interfaces. The contractor shall pay particular attention to the investigation, simulation, and development of communication technologies and other newly developed protocols and networking algorithms. The contractor shall develop, test, and evaluate prototype units using these technologies to demonstrate their viability in a tactical environment.

The contractor shall also simulate, analyze, and develop advanced correlation algorithms, control and routing algorithms, and other algorithms and control software which will be incorporated into various tactical communication systems/terminals.

The contractor shall develop models, simulations and prototypes of high-speed network management devices that can automatically react to the changing tactical environment. The devices should permit information to be automatically rerouted when various tactical nodes are lost. The contractor shall also investigate, analyze, and develop models/simulation for the relay of sensor data from/to various platforms.

3.10 Technology Transfer

The contractor shall assist the government in the technology transfer of space, tactical, airborne and ground systems development under this contract. The research and development environment of NRL requires a strong coordination between NRL and other organizations and agencies. This coordination requires that various advanced technologies and devices developed by NRL be made available to other organizations with similar needs. Special emphasis will be placed on promoting the transfer of technology to encourage the free flow of new concepts and ideas and to reduce redundant development efforts.

The contractor shall generate materials for formal and informal training presentations to government and contractor personnel at Technical Interchange Meetings (TIM's). These TIMs will have a minimum of 10 and a maximum of 55 attendees. The information presented at these sessions will be aimed at enhancing the ability of individuals to grasp the concepts and technical information relating to the space and ground systems developed by the NRL.

3.11 S/W Engineering and Development

The contractor shall provide, as required, plans for each identified software engineering project, a set of software requirements, to include both functional and interface requirements. The contractor shall identify detailed functional, performance, interface, and qualification requirements for each computer SW configuration item (CSCI).

The contractor shall provide a configuration management (CM) system compatible with the NRL SSDD CM system and shall enable transfer of data between the contractor, NRL SSDD and program sponsors.

The contractor shall provide evaluation of software using software metric tools such as McCabe, Logiscope, QA Metrics and Software Test Works (STW) to determine the potential reengineering value of legacy software/code.

The contractor shall provide software engineers to assist in the installation and usage of COTS and GOTS.

3.12 Communications Systems

The Contractor shall investigate new algorithms, develop models, simulations, and advanced prototype communication units. The Contractor will then test, operate, and enhance these units as part of the SSDDís continuing support of tactical communications.

4.0 Desired Personnel Requirements

It is SSDD's estimate that a total of 185 man-years of direct labor are required for each year of the contract for all tasks. One man-year is defined as 1,880 hours. A miscellaneous category has been formed to account for numbers of individuals that are required to perform the efforts in diverse areas detailed in the SOW. This category includes areas such as logistics, administration, clerical, and drafting

The Contractor should provide personnel possessing the education and experience as described below.

Systems Engineer

Education

Bachelors degree from an accredited university or college in Engineering, Mathematics or Computer Science; or Associates degree in Engineering or a related physical science combined with six (6) years of applicable experience.

Experience

At least Five (5) years of experience providing systems engineering support for space and/or communication systems. Systems engineering experience with Low Earth Orbiting (LEO) satellites is particularly desirable. Experience in the area of maintaining and enhancing highspeed network systems using exiting platforms or developing new network systems is necessary.

Typical Assignments

A. After reviewing system specifications, interface control documents, and other appropriate documents, assists cognizant personnel in the development of system specifications.

B. Makes or influences decisions regarding the redesign or reconfiguration of systems or subsystems after evaluating existing or proposed requirements.

C. Directs or conducts research necessary for the development of new systems or the enhancement of existing systems.

D. Using sound engineering judgment and taking into account such factors as performance, cost, and reliability, develops new systems or enhances existing systems by assembling or integrating component subsystems.

E. Insures system compatibility by developing communication protocols and interface standards. Insures that these standards and protocols are implemented in new system and/or subsystem designs.

F. Prepares or supervises the preparation of engineering drawings and documentation relative to design activities.

G. Provides technical assistance and guidance to subordinates and superiors in conjunction with ongoing design activities.

Electrical Engineer

Education

Bachelors degree from an accredited university or college in Engineering or an Associates degree in Engineering or a related physical science combined with ten years of applicable experience.

Experience

At least Five (5) years of experience providing electrical engineering support for space and/or communication systems. Experience in designing flight hardware for Low Earth Orbiting (LEO) satellites or tactical communications systems is particularly desirable.

Typical Assignments

A. Directs or conducts research necessary for the development of new systems or the enhancement of existing systems.

B. Using sound engineering judgment and established design practices, designs and develops new electronic circuits and subsystems to meet established specifications and requirements.

C. Tests and evaluates circuits and subsystems to ensure compliance with compatibility and performance specifications. Determines the source and corrects all anomalies discovered during testing. Ensures the reliability of new designs.

D. Prepares or supervises the preparation of engineering drawings and documentation relative to design activities.

E. Provides technical assistance and guidance to subordinates and superiors in conjunction with ongoing design activities.

Computer Scientist

Education

Bachelors or Advanced degree in Mathematics, Engineering, Computer Science, or some other appropriate field; or corresponding Associates degree combined with a minimum of six years of applicable experience.

Experience

At least Five (5) years of experience developing algorithms and software for space and/or communication systems. Systems engineering experience with Low Earth Orbiting (LEO) satellites, test equipment and satellite ground stations is particularly desirable. Experience in the area of maintaining and enhancing highspeed network systems using exiting platforms or developing new network systems is necessary.

Typical Assignments

A. Applies a broad range of programming concepts to assignments of a complex and sophisticated nature to solve scientific and/or engineering problems through the use of data processing equipment.

B. Under minimal supervision, exercises appreciable latitude for actions or decisions in meeting the requirements of task assignments. Acts as programming leader under higher management direction to accomplish task assignments as required.

C. Analyzes system specific actions to obtain direction for programming activities and may, if required, provide subsystem specifications to further augment satisfactory job completion.

D. Employs structured techniques in all phases of software development.

E. Designs and codes software.

F. Tests and debugs programs and prepares operating procedures to guide operators.

G. Evaluates and modifies existing programs using improved techniques or incorporating new system requirements or equipment configurations.

H. Provides technical assistance and guidance to subordinates and superiors in conjunction with ongoing activities.

Computer Specialist

Education

Bachelors degree in Mathematics, Engineering, Computer Science or some other appropriate field; or corresponding Associates degree combined with a minimum of four years of applicable experience.

Experience

At least Five (3) years of experience generating software for space and/or communication systems. Experience with Low Earth Orbiting (LEO) satellites and other real-time systems is particularly desirable. Experience in the area of maintaining and enhancing highspeed network systems using exiting platforms or developing new network systems is necessary.

Typical Assignments

A. Designs and implements non-routine software programs in the following application areas: operating systems; command, control and communication systems; and engineering or scientific applications.

B. Confers and collaborates with system analysts, customers, other entities in systems and/or application planning and accomplishment.

C. Employs structured techniques in designing, coding, testing, and documenting programs.

D. Designs and codes programs.

E. Tests and debugs programs and prepares procedures to guide operators.

F. Originates programming documentation and updates it as required.

G. Evaluates and modifies existing programs using improved techniques or taking into account changes in system requirements or equipment configurations.

H. Develops simulated data for test purposes.

Electronics Technician

Education

Associates degree in Engineering, Computer Science, or Mathematics, or some other appropriate field, or 2 years of equivalent applicable experience.

Experience

At least one (1) year of experience providing support to space and/or communication systems. Experience with COTS hardware integration is particularly desirable.

Typical Assignments

A. Performs a variety of complex technical duties, including systems modification, troubleshooting, tests, and major repairs on electronic and electro-mechanical equipment as a part of a maintenance and operations process. Work requires an in-depth knowledge of electronic theory and practices.

B. Reads and interprets schematic and wiring diagrams, wave forms and diagnostic results, assembly drawings and specifications, and relates these to overall system performance or malfunctions.

C. Disassembles and reassembles complex equipment for the repair or replacement of defective parts, wiring, and electrical or mechanical units.

D. Assembles and fabricates systems from the component level using correct wire wrap, solder, and assembly techniques.

E. Assists in the design of electronic circuits and mechanical modifications to permit successful interfacing of equipment to related systems.

F. Inspects, tests, and advises on the operation and troubleshooting of equipment such as computer systems and associated peripheral hardware.

G. Directs or coordinates the work of other technicians, as assigned.

Program Manager

Education

Bachelors and/or Masters degree from an accredited university or college combined with six years of applicable experience.

Experience

At least Five (5) years of experience providing management support for space and/or communication systems. Experience with Low Earth Orbiting (LEO) satellites and tactical communications development programs is particularly desirable.

Typical Tasks

A. Develops program plans for the successful execution of new or existing development efforts. Ensures that adequate resources are available to complete the efforts.

B. Develops Cost Work Breakdown Structures (CWBS), schedules, budgetary estimates for tracking the technical and financial performance of new or existing development efforts.

C. Makes or influences decisions regarding the redesign or reconfiguration of systems or subsystems after evaluating existing or proposed system requirements.

F. Monitors the technical performance of ongoing activities. Reassigns or adjusts resource priorities to ensure the timely completion of projects.

G. Manages the efforts of the managerial, technical and administrative personnel assigned to complete various aspects of ongoing or new projects.

H. Deals directly with the customer and is responsible for maintaining good relations with the customer as well as fostering good inter-company relations where applicable.

Mechanical Engineer

Education/Experience:

BS degree in engineering or applied science with at least 3 years of related experience. in lieu of formal education, 11 years of directly related work experience.

Typical Tasks:

Performs a variety of engineering work in planning and design of products, tools, engines, machines and other mechanically functioning equipment and mechanical industrial processes, including thermodynamic and fluid systems.

Oversees production, installation, operation, maintenance and repair of such equipment.

Works closely with other engineering disciplines in the development and application of robotics to increase production quality, efficiency or volume.

Works with electrical engineers in the design and development of electro-mechanical devices and components.

Works with aerospace engineers in the design and development of mechanical, environmental, and ordnance subsystems for aerospace vehicles, such as satellites.

Related or sub-engineering disciplines in this position category: industrial engineering, metallurgical/materials engineering, nuclear engineering, optical engineering and production/processing engineering.

Executes specific engineering assignments under the direction and guidance of higher level engineers.

Carries out predetermined concepts and procedures for equipment or component design, testing, construction and installation, engineering research and study programs.

Works independently, directing and coordinating the work of engineers and other technical personnel engaged in the compilation of engineering data, construction and testing of models, designing subsystem components, writing reports and test procedures.

Performs other functions necessary to complete engineering assignments.

Assists other high level engineers or higher level engineering program cements engaged in an engineering or research project.

Assumes responsibility for a major segment of related work.

Represents the company at subcontractor's plants, customer's engineering department, field and test installations or other field locations.

May act as leader for a small single function team; represents the organization related to a specific project.

A miscellaneous category has been formed to account for numbers of individuals that are required to perform the efforts in diverse areas detailed in the SOW. This category includes areas such as logistics, CM, administration, and clerical.

Responsibilities of Position:

Performs various administrative projects/assignments which may require the development of new solutions to department/site operational issues.

Implements management directives and adapts internal systems and procedures to enhance operating efficiencies, in support of operating objectives.

Prepares and analyzes data, such as budget/cost estimates, contract specifications, flow charts, and labor hour estimates.

Maintains department/site databases and statistical spreadsheets.

May serve as department/site training coordinator.

Administers or assists in the administration a financial management system including financial planning, budgeting, etc. by applying sound accounting principals.

May conduct physical inspections of equipment, track/maintain inventory records and prepare related topics.

May maintain personnel records for department/site including leave records, salary actions, expense reports, etc. ensuring compliance with company policies and procedures.

Experience with and knowledge of MILSTD and DoD Standards, plus 5 years experience. It is highly desirable to hold a Certified Configuration Specialist certificate from the American Defense Preparedness Association.

Identifies, controls, status accounting; and audit/review requirements of CM discipline.

Knowledgeable of management controls.

Provides all levels of CM support to Program/Project Managers.

Assist with the identification of configuration items. Updates configuration control processes as required.

Performs status reporting. Supports audits and reviews, distributes minutes of same and track action items.

Decisions may impact program/department expenditure of resources.

Exhibits full use and application of standard business administration principles and practices.

Frequently deals with multiple problems at the same time.

Resolves administrative/operational issues in primary functional area.

Minimal customer influence

Performs all other duties as assigned.

Project Coordinator

Education

Bachelors degree in Accounting or Business Administration; or corresponding Associates degree; or 3 years of applicable experience.

Typical Assignments

A. Establishes an operational plan for the completion of assigned tasks including scheduling, staffing, materials, and facilities to meet contract requirements at minimum cost.

B. Monitors the technical performance, progress, and fiscal status of tasks on a continuing basis and takes management action to correct any deficiencies at the earliest possible time.

C. Makes recommendations for the origination or augmentation of policies and procedures to meet specific needs of the customer.

D. Monitors wage and salary budgets and expense account data to effect control of established budget factors and policy limitations.

E. Ensures that fiscal responsibilities are in compliance with Government and program requirements. Audits accounts.

CAD Operator/Specialist

Education

Associates degree in Electromechanical Drafting with associated special courses in the use and application of computer-aided design techniques or equivalent experience. A minimum of five (5) years experience as a CAD designer using analog, digital and surface-mount design techniques when performing layout of high-density boards. Knowledge of Mentor and or AUTOCAD operating systems and ORCAD schematic capture system is desirable.

Typical Assignments

A. Interface with mechanic packaging engineering.

B. Coordination with electrical engineering on specific requirements.

C. Develop component identification schemes and symbols for including in the CAD Library

D. Maintain the CAD Library.

E. Checking designs to ensure compliance with all standards.

F. Interface with drafting on all assembly drawings.

G. Supply documentation packages to Configuration Control before release.

Appendix A
Acronym List

ADP	Automated Data Processing
ARAST	Automated Range and Synchronization Test
ATD	Advanced Technology Demonstration
ATM	Asynchronous Transfer Mode
BEM	Bus Ear Mouth
CAD	Computer Aided Design
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CM	Configuration Management
CO	Contracting Officer
CONOPs	Concept of Operations
COR	Contracting Officerís Representative
COTS	Commercial Off the Shelf
CSSR	Cost/Schedule Status Report
CWBS	Contract Work Breakdown Structure
DLDC	Data Link Data Compressor
DM	Data Management
DOD	Department of Defense
EHF	Extremely High Frequency
EMI	Electromagnetic Interference
EPS	Electrical Power System
GFE	Government Furnished Equipment
ICD	Interface Control Documents
ICM	Interface Communication Module
IV&V	Independent Verification and Validation
IWL	Interface Wire Lists
MSR	Monthly Status Report
NCST	Naval Center for Space Technology
NRL	Naval Research Laboratory
OCS	Ordinance Control Equipment
PDR	Preliminary Design Review
PTG	Pulse Timing Generator
RASTU	Range and Synchronization Test Unit
RCE	Reaction Control Equipment
RF	Radio Frequency
RFI	Radio Frequency Interference
SHF	Super High Frequency
SOW	Statement of Work
SRR	Systems Requirements Review
SSDD	Space Systems Development Department

STF	Special Test Equipment
TIM	Technical Interchange Meeting
TT&C	Telemetry Tracking & Command
UHF	Ultra High Frequency
VHF	Very High Frequency

CONTRACT DATA REQUIREMENTS LIST
(2 Data Items)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0002	A	TDP _____ TM – _____ OTHER _____

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	COST/PERFORMANCE/BUSINESS REPORTS	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT			
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**

16. REMARKS

THE CONTRACTOR SHALL PROVIDE BUSINESS REPORTS, WHICH SHALL INCLUDE, MAY NOT BE LIMITED TO:
** FINANCIAL REPORTS
** CONTRACT WORK BREAKDOWN STRUCTURE REPORTS

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	Final: Reg	Final: Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A002	FINAL REPORTS	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
DD250**		OTIME	**
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
		**	N/A

16. REMARKS

A FINAL REPORT IS DEFINED AS A SPECIFIC OR TECHNICAL REPORT WHICH SUMMARIZES ALL WORK ACCOMPLISHED UNDER THE TASK ORDER OR CONTRACT. REPRINTS OF PUBLISHED ARTICLES MAY BE ACCEPTABLE AS TECHNICAL REPORTS WITH THE CONCURRENCE OF THE COR.

FINAL REPORTS SHALL BE DISTRIBUTED IN ACCORDANCE WITH ENCLOSURE (1) TO ATTACHMENT 1.3.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	Final: Reg	Final: Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
		[signature]	10/29/98

CONTRACT DATA REQUIREMENTS LIST
(2 Data Items)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0002	A	TDP ____ TM – ____ OTHER ____

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACT

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A003	COMPUTER-BASED DELIVERABLES	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		ASREQ	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**

16. REMARKS

THE CONTRACTOR SHALL PROVIDE COMPUTER-BASED DELIVERABLES WHICH SHALL INCLUDE, BUT MAY NOT BE LIMITED TO: SOFTWARE, DATABASES, MODELS, COMPUTER SIMULATIONS, ALGORITHMS, PROGRAMS, DOCUMENTATION, INSTRUCTIONS, COMPUTER-GENERATED DRAWINGS AND DESIGNS, AND SOURCE CODE. THIS DOCUMENTATION SHALL BE PROVIDED ON BOTH ELECTRONIC AND HARD-COPY MEDIA.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A004	TECHNICAL REPORTS	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	NRL CODE 8102

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
N			
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**

16. REMARKS

FOR THE PURPOSE OF THIS DOCUMENT, "TECHNICAL REPORTS" SHALL INCLUDE, BUT MAY NOT BE LIMITED TO: PROGRAM DOCUMENTATION, PROGRAM BRIEFINGS, DEVELOPMENT SPECS., INTERFACE CONTROL DOCUMENTS, PROGRAM SCHEDULES, TEST PLANS, TYPE B2 SPECS., SOFTWARE DEVELOPMENT SPECS., FORMAL AND INFORMAL TECHNICAL REPORTS, SYSTEM DESIGN PACKAGES, INTEGRATED LOGISTICS SUPPORT DOCUMENTS, RMA TRADE STUDIES, RELIABILITY ENGINEERING REPORTS, WORST CASE ANALYSES, FAILURE ANALYSES, EXPERIMENT REPORTS, RECOMMENDATIONS, WRITTEN SPECS., TEST PLANS, TEST OBSERVATION REPORTS, LISTS, CONCEPT PAPERS, ISSUE PAPERS, MANAUALS, OPERATION DOCUMENTATION, TECHNICAL REVIEWS, PROBLEM RESOLUTION REPORTS.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
		Ann F. Burkhardt	10/29/98

CONTRACT DATA REQUIREMENTS LIST
(2 Data Items)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0002	A	TDP _____ TM – _____ OTHER _____

D. SYSTEM / ITEM	E. CONTRACT / PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A005	TECHNICAL PROGRESS REPORTS	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT			
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**

16. REMARKS

THE CONTRACT SHALL PROVIDE TECHNICAL PROGRESS REPORTS, WHICH SHALL INCLUDE, MAY NOT BE LIMITED TO: MONTHLY STATUS REPORTS, MILESTONE CHARTS, AND GOVERNMENT-FURNISHED EQUIPMENT REPORTS.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	Final: Reg	Final: Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A006	OTHER DELIVERABLES AS MAY BE REQUIRED UNDER T.O'S	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	SOW PARAGRAPH 3.1-3.12	NRL CODE 8102

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
		ASREQ	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
AN			

16. REMARKS

THE CONTRACTOR SHALL DELIVER ANY OTHER DELIVERABLE AS MAY BE REQUIRED UNDER EACH INDIVIDUAL TASK ORDER, AS APPLICABLE.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	Final: Reg	Final: Repro
COR		1	2
15. TOTAL →		1	2

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
		Dan F Burkett	10/29/98

ENCLOSURE (1) TO DD FORM 1423
INSTRUCTIONS FOR DISTRIBUTION

DISTRIBUTION OF TECHNICAL REPORTS

The minimum distribution of technical reports and the final report submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	NUMBER OF COPIES UNCLASSIFIED/ UNLIMITED	NUMBER OF COPIES UNCLASSIFIED/LIMITED AND CLASSIFIED
COR Naval Research Laboratory Code: 4555 Overlook Ave., S.W. Washington, DC 20375-5320	N00173	1	1
Administrative Contracting Officer		1	1
Director Naval Research Laboratory ATTN: Code: 5227 4555 Overlook Ave., S.W. Washington, DC 20375-5326	N00173	1	1
Defense Technical Information Center (DTIC) 8725 John J. Kingman Rd. Suite #0944 Fort Belvoir, VA 22060-6218	S47031	4	2

DISTRIBUTION OF NON-TECHNICAL REPORTS

The minimum distribution of non-technical reports submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	NUMBER OF COPIES UNCLASSIFIED/ UNLIMITED	NUMBER OF COPIES UNCLASSIFIED/LIMITED AND CLASSIFIED
COR	N00173	1	1
Administrative Contracting Officer (DCMAO)		1	1

DEPARTMENT OF DEFENSE
CONTRACT SECURITY CLASSIFICATION SPECIFICATION

(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)

1. CLEARANCE AND SAFEGUARDING SER:063-98

a. FACILITY CLEARANCE REQUIRED: TOP SECRET

b. LEVEL OF SAFEGUARDING REQUIRED: SECRET

2. THIS SPECIFICATION IS FOR: *(X and complete as applicable)*

	a. PRIME CONTRACT NUMBER	
	b. SUBCONTRACT NUMBER	
X	c. SOLICITATION OR OTHER NUMBER: 81-7047-98	Due Date (YYMMDD):

3. THIS SPECIFICATION IS: *(X and complete as applicable)*

X	a. ORIGINAL *(Complete date in all cases)*		Date (YYMMDD): 981028
	b. REVISED *(Supersedes all previous specs)*	Revision No.	Date (YYMMDD):
	c. FINAL *(Complete item 5 in all cases)*		Date (YYMMDD):

4. IS THIS A FOLLOW-ON CONTRACT? [ ] YES [X] NO. If Yes, complete the following:

Classified material received or generated under _____ *(Preceding Contract Number)* is transferred to this follow-on contract.

5. IS THIS A FINAL DD FORM 254? [ ] YES [X] NO. If Yes, complete the following:

In response to the contractor's request dated _____, retention of the identified classified material is authorized for the period of _____

6. CONTRACTOR *(Include Commercial and Government Entity (CAGE) Code)*

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD		

7. SUBCONTRACTOR

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
N/A		N/A

8. ACTUAL PERFORMANCE

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE *(Name, Address, and Zip Code)*
N/A		N/A

9. GENERAL IDENTIFICATION OF THIS PROCUREMENT

CONTINUATION OF SUSTAINED ENGINEERING CONTRACT

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION	X	
b. RESTRICTED DATA		X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X
d. FORMERLY RESTRICTED DATA		X
e. INTELLIGENCE INFORMATION:		
(1) Sensitive Compartmented Information (SCI)		X
(2) Non-SCI		X
f. SPECIAL ACCESS INFORMATION		X
g. NATO INFORMATION		X
h. FOREIGN GOVERNMENT INFORMATION		X
i. LIMITED DISSEMINATION INFORMATION		X
j. FOR OFFICIAL USE ONLY INFORMATION		X
k. OTHER *(Specify)*		

11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES	NO
a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY		X
b. RECEIVE CLASSIFIED DOCUMENTS ONLY		X
c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	X	
d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE	X	
e. PERFORM SERVICES ONLY		X
f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		X
g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X
h. REQUIRE A COMSEC ACCOUNT	*X	
i. HAVE TEMPEST REQUIREMENTS		X
j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		X
k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE	X	
l. OTHER *(Specify)*		

CLASSIFIED AUTOMATED INFORMATION SYSTEM PROCESSING
*SECURE VOICE CAPABILITY

12. PUBLIC RELEASE. Any information *(classified or unclassified)* pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release

[ ] Direct [X] Through *(Specify)*:

Commanding Officer, Naval Research Laboratory, Washington, DC 20375-5320, Code 8102.

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)* for review.
* In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. *(Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)*

Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a TOP SECRET facility clearance, SECRET storage capabilities, and personnel available with DoD granted personnel security clearances commensurate with level of access required for performance of contract.

14. ADDITIONAL SECURITY REQUIREMENTS. Requirements, in addition to ISM requirements, are established for this contract. *(If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.)* [ ] Yes [X] No

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. *(If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.)* [ ] Yes [X] No

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE *(Include Area Code)*
TINA SMALLWOOD	Contracting Officer, Security	(202)767-2240/2521

d. ADDRESS *(Include Zip Code)*
Naval Research Laboratory
4555 Overlook Ave., SW
Washington, DC 20375-5320

e. SIGNATURE
Tina Smallwood

17. REQUIRED DISTRIBUTION

- [X] a. CONTRACTOR
- [ ] b. SUBCONTRACTOR
- [X] c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
- [ ] d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
- [ ] e. ADMINISTRATIVE CONTRACTING OFFICER
- [X] f. OTHERS AS NECESSARY 1221.11,1221.4,8102

DD Form 254 Reverse, DEC 90

☆ U.S. GOVERNMENT PRINTING OFFICE: 1996 - 704-002/22368